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The Health Bulletin

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[This Bulletin will be sent free to any citizen of the State upon request!]

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JANUARY, 1942

No. 1



GEORGE MARION COOPER, M.D.

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The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months;
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Breast Feeding	Instruction for North Carolina Midwives
Infant Care. The Prevention of Infantile Diarrhea	
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JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By THE ACTING EDITOR

DOCTOR COOPER **A**FTER nineteen years of continuous service as editor of THE HEALTH BULLETIN, Dr. G. M. Cooper has been granted a leave of absence for an indeterminate period. This is the cause of genuine regret to the staff of the State Board of Health and to the readers of the 60,000 copies of the BULLETIN that are distributed each month.

The increase in activities of the Division of Health Education, Crippled Children's Work, and Maternal and Child Health Service, directed by Dr. Cooper, together with the difficulty in securing medical personnel to assist him in carrying out the program of his Division combined in influencing him to wish a respite. Consequently, he is being given a breathing spell which all his friends hope will result in his again becoming editor within a short period.

During these nineteen years Dr. Cooper has actually written more than 1,200,000 words for THE HEALTH BULLETIN. This is more than 1,825 pages, the equivalent of some five conventionally sized novels. But Dr. Cooper's writing was not fiction—it was hardheaded advice on the way to health. The variety of subjects which he has discussed, if indexed, would be a complete list of public health problems which have arisen during the past two decades. In

these writings there was no evasion nor sidestepping. If public well-being was endangered, the rights of the little man were just as important as were those who by general acceptance occupied high positions in our social order. He was not a cantankerous editor, looking for a quarrel, but neither did he dodge the responsibility of speaking out against a quack or charlatan.

In 1923 when Dr. Cooper became editor of THE HEALTH BULLETIN it had the high traditions established by its founders, Dr. Thomas Fanning Wood and Dr. Richard H. Lewis. Volume I, Number 1, appeared in April, 1886. It was edited by Dr. Wood, who from his office in Wilmington, served as Secretary of the State Board of Health and editor until his death in 1892. He was truly an evangelistic spirit with unlimited effort from the early seventies until the end. The torch which he lighted then passed to the equally unselfish and able hands of Dr. Lewis. Without faltering this wise leader carried on until his goal was reached in 1909 by the enactment of laws providing for a whole-time State health officer. Dr. W. S. Rankin, the State's first health officer, also served as editor with the assistance of various members of his staff until he designated Dr. Cooper to carry on this responsibility.

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Since 1923 public health work has made remarkable progress, entering new fields and establishing new methods in old ones. In days when there were no well-defined fields for health publications, Dr. Cooper formulated policies, established precedents, chartered a straight course, blazed a trail, and literally constructed a highway. Many other state health department publications have been modeled after Dr. Cooper's *HEALTH BULLETIN*. Since imitation is the most sincere form of praise, we have abundant evidence that others like Dr. Cooper as an editor. Those of us who follow him will do well to step in his tracks, even though the imprints we make fail to measure up in size or length of stride. We pledge our best efforts to stay on the trail and to keep our feet pointed in the same direction which he has traveled.

Besides having a talent for straight thinking and for expressing himself clearly, Dr. Cooper had a background which aided him materially in becoming an outstanding editor among editors of health publications. As a young man he taught school before he studied medicine. As a practitioner of medicine he had his office in the county seat of an agricultural section comparable to many other communities in North Carolina. He observed firsthand the need for preventive medicine and practiced it first as a family physician, later as a part-time county physician, and still later as one of the first whole-time county health officers in North Carolina. His services in this capacity were so outstanding that he was called to the State Board of Health to serve the one hundred counties of North Carolina, becoming, in May, 1915, Director of Rural Sanitation in the State Board of Health. Since that time Dr. Cooper has had many titles and has directed many activities. Perhaps because of his background and ability many of the most

difficult and hazardous undertakings of the State Board of Health have been assigned to him. In all of these he gave a good accounting of himself.

It is probable that anyone else would have made a miserable failure of the tonsil-adenoid clinics, but Dr. Cooper not only succeeded in carrying out a spectacularly successful health education program, but materially aided in building a sturdy group of medical specialists who hold him in highest regard.

In the field of oral hygiene Dr. Cooper was also a pioneer and laid so strong a foundation in this field of endeavor that in 1931 a new division of Oral Hygiene was created in the State Board of Health. Today the dental profession honors Dr. Cooper above all other physicians in North Carolina.

The Maternal and Child Health Program now being carried out by Dr. Cooper reaches into every community in the State and is doing much to safeguard the mothers of North Carolina and their children. Our vital statistics show that he is saving hundreds of lives each year.

The scope of his work and his experience, together with the nature of his talents, make him a competent appraiser of public health practice. He has seen many ideas advanced, some to be broken on the anvil of experience—while others could withstand the blows and show their true worth. He has seen public health administration advance by the method of trial and error. His judgment is most valued by experienced health administrators. Our own State Health Officer, Dr. Carl V. Reynolds, places a very high value on Dr. Cooper's appraisal of new ideas or old practices.

Dr. Cooper has been a good soldier. He has served in lean years as faithfully as in those when the going was easier. Through it all he has been a quiet, unassuming gentleman. He has not sought honor or preferment. Those

of us who have been associated with him have more or less taken him for granted. We knew we could call upon him for help when we needed it. We have neglected to help and encourage him. We have failed to tell him that we appreciate his good services. We could have added to his happiness in ways which we have failed to try. We could not, however, have expressed any praise of him in THE HEALTH BULLETIN while he was serving as editor. His inherent modesty would have rebelled at any effort of this sort. But now that he is to have a leave of absence the acting editor knows that he speaks for thousands in saying, "We appreciate your service, Dr. Cooper."

* * * *

THANK YOU, Frequently professional **GOVERNOR** public health workers overlook some important or timely subject. We always appreciate it when these oversights are called to our attention. It is particularly pleasing when those occupying high positions have a sympathetic understanding of public health. Governor Broughton's interest is, therefore, doubly gratifying:

"DEAR DR. REYNOLDS:

I received a communication from a very thoughtful lady the other day stating that the request from Washington and elsewhere for conservation of fuel in the heating of homes has met the response in some homes that they have to keep the homes extra hot on account of young babies. In this connection the lady states:

"The second reason, or excuse, is that babies need to be kept very warm. Therefore, another step in helping the situation would be in getting the Board of Health to issue a statement as to the temperature the room should be in which there is a baby or small child. Most mothers have the idea that they need much more heat than they do."

"I pass this on for your consideration.

Cordially yours,
J. MELVILLE BROUGHTON."

The following quotation from *Infant Care*, Children's Bureau Publication No. 8, page 16, should be helpful:

"In order that the baby may be covered properly at night and dressed suitably during the daytime, the temperature of his room should be known. A thermometer should be hung on an inside wall at the level of the crib—about three feet from the floor. Do not put it near the register or the radiator. The baby's clothing and covering should be adjusted to the temperature of the room, which should be kept even."

"A very young baby, or a delicate one, requires a warmer room than an older or more robust baby. For the first weeks of the baby's life the temperature of the room should be kept between 70 and 75 degrees F., day and night. For older and for stronger babies the day temperature may be from 68 to 70 degrees F., and the night from 55 to 60 degrees F. A baby should be protected by screens against drafts of cold air. The temperature and moisture of the room should be kept as even as possible."

This hundred-page booklet contains many other helpful suggestions. Thousands of these booklets have been distributed. It is possible for any mother to secure a copy free of charge by writing the Maternal and Child Health Service, State Board of Health, Raleigh, North Carolina.

* * * *

GERATICS Everyone wishes to live long enough to grow old; therefore, why should we not plan life for old age? To grow old gracefully should be a high ambition. For this issue of the BULLETIN, Dr. Roscoe McMillan, Secretary-Treasurer of the Medical Society of the State of North Carolina, has written an article on "Problems of the Aged," in which he discusses, as completely as possible in so limited a space, some of the diseases most prevalent among those in advanced life. The increasing number of elderly people is stimulating interest among physicians in the conditions relating to

old age. Some twenty years ago very few of our lay people had any conception of the word "Pediatrics." Twenty years from now the word "Geriatrics" will be a familiar word and will be definitely identified with those specializing in the diseases of the elderly. No one can deny that good health is just as important in old age as it is in any age. Mental and physical activities properly adapted to the physical conditions of the aged is an essential part of pleasant existence. Sudden changes from an active career to inactivity are likely to be disastrous. A man whose only interest was business, who never had time for recreation or outside interest, will find it difficult to learn to play after he is sixty-five. Life should be a gradual adaptation to changing conditions.

Some elderly people find it difficult to become reconciled to being old. An excellent essay on old age was written some two thousand years ago by Cicero. The following excerpts have stood the tests of time and should be helpful to those who now or who will soon consider themselves old:

There is a quiet, pure, and cultivated life which produces a calm and gentle old age. . . . The philosopher himself could not find old age easy to bear in the depths of poverty nor the fool feel it anything but a burden though he were a millionaire. . . . Some can support two burdens considered the heaviest of all, poverty and old age, in such a manner as to be all but fond of them. . . . We must look after our health, use moderate exercises, take just enough nutriment to recruit but not overload our strength. Nor is it the body alone that must be supported, but the intellect and soul much more. . . . But it may be said many old men are so feeble that they cannot perform any duties of any sort or kind. This is not a weakness to be set down as peculiar to old age. It is shared by ill health of all ages. Why wonder that old men are eventually feeble, when even young men cannot always escape it. . . . But it will be said, old men

are fretful, fidgety, ill-tempered, and disagreeable. If you come to that, they are also avaricious. But these are faults of character, not of the time of life.

. . . Active exercise and temperance will preserve some part of one's strength, even in old age. . . . An old man should no more resent the loss of physical strength than as a young man he missed the strength of the bull or the elephant. Let each man proportion his effort to his power. . . . The old man does not do what young men do; nevertheless, he does what is more important and better. Rashness is the role of youth, prudence of old age. . . . There are certain pursuits adapted to childhood. Do young men miss them? There are others suited for early manhood. Does that settled time of life called "middle age" ask for them? There are others suited to that age, but not looked for in old age. There are finally some which belong to old age. . . . Do you wish again to be a babe crying in your crib? Many old people are only too glad to be freed from the bondage of passion and are not at all looked down upon by their friends. . . . But you will say old age deprives us of the pleasures of the table, the heaped-up board, the rapid passing of the wine cup. Well, then it also frees us from the headaches, disordered digestion and broken sleep. . . . He cannot be said to lack who does not want. . . . Intellect is the best gift of nature or God. To this divine gift and endowment there is nothing so inimical as pleasure. For when appetite is our master, there is no place for self-control nor where pleasure reigns supreme can virtue hold its ground. . . . In fine, enjoy a blessing while you have it. When it is gone do not wish it back, unless we think that young men should wish their childhood back and those somewhat older their youth. The course of life is fixed and nature admits of its run but in one way, and that only once. To each part of our life there is something specially seasonable so that the problems of children as well as the high spirit of youth, the soberness of mature years and the ripe wisdom of old age—all have a certain natural advantage which should be secured in its proper season. . . . Men who have no resources in themselves for securing a good and happy life find every age burdensome. . . . Did old age steal upon manhood faster than manhood

upon childhood? . . . There are old farmers without whose presence farm work of importance is scarcely ever performed—whether sowing or harvesting or storing the crop. He plants his trees to serve a race to come. . . . Never give in to old age by growing slack. A man who is always living in the midst of his studies or labors does not perceive when old age creeps upon him. Thus, by slow, imperceptible degrees life draws to an end. There is no sudden breakage. It just slowly goes out. . . . Successful old age has been established on foundations laid by youth. It is the honorable conduct of earlier days that is rewarded by possessing influence at the last. . . . The consciousness of a well-spent life and the recollection of many virtuous actions are exceedingly delightful. The crowning grace of old age is influence. . . . The nearness of death cannot be far from an old man. The prospect of death faces all ages. Youth wishes to live long. Old age has lived long. . . . Death also befalls young men though nature revolts and fights against it. Accordingly death of young men seems like putting out a great fire with a deluge of water; but old men die like a fire going out. Again as apples when unripe are torn from trees, but when ripe and mellow drop down. This ripeness is pleasing to old age. . . . A short term of life is long enough for living well and honorably. But if you go further, you have no more right to grumble than farmers do because the charm of the spring season is past and the summer and autumn have come. . . . As I approach nearer to death, I seem as it were to be sighting land and to be coming to port after a long voyage. . . . I quit life as I would an inn, not as I would a home.

To which let us add the following from Robert Browning:

"Grow old along with me!
The best is yet to be,
The last of life, for which
 the first was made;
Our times are in His hand
Who saith, 'A whole I planned,
Youth shows but half; trust
 God; see all, nor be afraid'!"

SCHOOL OF PUBLIC HEALTH In the March 1936 issue of THE HEALTH BULLETIN an important announcement and a prophecy were made:

"The most important development in public health circles in many years for this section of the South is the establishment at Chapel Hill of a department of public health in connection with the School of Medicine, and the selection of Dr. Milton J. Rosenau as its director. This development has been made possible by the coördination of the staffs of the faculties of the North Carolina State Board of Health and the schools of medicine and engineering of the University of North Carolina.

"For a long time the officials of the State Board of Health have worked hard to secure the establishment of such a school. The necessity for it has been apparent to all responsible health workers. The chief credit for success in launching the enterprise should go to Dr. Charles S. Mangum, Dean of the University Medical School, and to Dr. Carl V. Reynolds, State Health Officer. Both of these officials have worked hard and coöperated with each other in overcoming difficulties in the way of the establishment of the new department.

"In the opinion of Drs. Mangum and Reynolds the development was in part made possible by the success of the course put on in the school year of 1934 and 1935 at the University under the auspices of the School of Public Administration. The first course put on with the teaching aid of the schools of medicine and engineering of the University and members of the staff of the State Board of Health comprised a course of instruction for physicians in public health administration and extended over a period of twelve weeks. The work was so excellently done that they received recognition from the United States Public Health Service which assigned several of its applicants for postgraduate work to take the second course.

"We hope and believe that this enterprise under Dr. Rosenau's direction will expand into one of the most important departments of public health education in the entire country. The need for special training for physicians

who want to enter public health work is great. Efficient public health departments, national, state and local in modern conditions of living are an absolute necessity. There are large numbers of young physicians who, with proper post-graduate training, could make excellent health officers.

"The success of the new department at Chapel Hill will go a long way toward establishing an efficient system of public health work on a sound basis throughout the entire southeastern section of the country."

That the prophecy has been fulfilled will be seen by reading Dr. Brown's article appearing in this issue. Dr. Brown was one of the first of the bright

young men recruited to the faculty of the School of Public Health. He had excellent fundamental training in public health which, together with his native ability, soon established him as one of the leaders in the field of public health education. It was natural, therefore, that when the Division became the School of Public Health that Dr. Brown should be named as dean. Although the school is young in years and has a bright future before it, its past performance has already more than justified the hopes for it and the efforts and money that have gone into it.

Medical Problems of the Aged

By ROSCOE D. McMILLAN, M.D., *Secretary-Treasurer*

The Medical Society of the State of North Carolina

Red Springs, North Carolina

WITHIN the past century the advance of medical science practically changed "the survival of the fittest" to the survival of everybody, fit or not. It is not mere increase of years that is sought, but health in old age. Most of those who dread old age are thinking of the decrepitude which so often accompanies it—failing senses, uncertainty of the muscles, stiffness of the joints, hardening of the arteries, heart ailments, etc. Are these infirmities necessary?

This must be seriously considered when we read a report of the committee on population problems of the National Resources Commission, made in 1938, which pointed out that by 1980—if present population trends in the United States continue—there will be only 6,500,000 children under five years of age, and 22,000,000 people over sixty-five years of age. As someone aptly states, "We are becoming a nation of elders."

The practice of medicine is changing, as acute infective diseases fall more

and more under the control of preventive measures, the chronic and progressive disorders of middle and later life take increasingly important places. The only preventive measures known to be at all effective for the chronic degenerative diseases of later life entail the establishment of proper habits in early life, the avoidance of excesses, and the prompt removal of infectious foci detected by periodic health examinations. Not to be forgotten is the biochemical experimentation which has put the study of nutrition on a firm scientific basis. While the full influence of improved nutrition resulting from this work has not manifested itself, undoubtedly lower morbidity and mortality rates in a number of diseases will eventually follow.

It is a little difficult to know when senility begins. The medical man realizes that its onset is not marked solely by the flight of time. Physiologically it appears when degenerative changes have limited the individual's activities and

lessened or abolished his sex life. Pathologically its onset is visualized in extensive arteriosclerotic changes which make impossible an adequate distribution of blood and oxygen to the tissues.

Healthy, normal old age with equal wearing out of the parts is so rare I only mention it as a classification.

Pathologic or abnormal old age is burdensomely common. In a study of three hundred patients sixty years or more in age Barker determined that the circulatory apparatus was most commonly affected, next the nervous system, then the locomotive apparatus, finally the digestive system.

Since heart disease is numerically the leading cause of death and ranks first in all adult age groups at present, it is one of the most important problems in the field of preventive medicine as well as treatment. Diseases which, only a few years ago, were considered the special prerogative of older people now have become the property of middle-aged and younger individuals. The almost universal cause of heart disease of old age is arterial degeneration and I must confess until someone successfully completes the quest of Ponce de Leon for the Fountain of Youth, blood vessels will continue to degenerate, but we must use all the instruments at our disposal in a strong attempt to retard the degenerative process. At the risk of stirring up controversy, I shall set out but a very few of the things that are credited with accelerating the degenerative process.

A fairly good cause has been built up against the excessive use of alcohol and tobacco. I contend that intemperance in all habits plays a vital role. The same holds good for arteriosclerosis (hardening of the arteries) and cerebral hemorrhage which are predominately conditions of old age. These diseases rarely produce death in individuals under 45. After this time their significance

rapidly grows. The death rate for males exceeds that for females. This sex difference may be caused by the greater strain on the male in the business world but may also be due to an inherent difference in the arterial structures.

The most distressing development of old age are the mental symptoms. In the past this branch of medicine has been very much neglected because of the belief that arteriosclerosis or senile atrophy was the sole and only cause of these symptoms. In recent years study and observation have shown us not to be content that all mental symptoms are interpreted as straight pathologic developments of the aged, but to take into consideration other possible factors, toxic conditions, such as a definitely excessive use of sedative medication, operations, trauma, infections, emotional disturbances, etc.

The physician who studies these cases with an open mind cannot help but conclude that pathologic conditions alone such as senile dementia and arteriosclerotic psychosis are not the sole causes for mental disorders of older people, but rather a factor in the total etiology in that it affects or lowers the adjustability of the whole organism and its physiologic processes, thereby making it easier for the various types of psychosis to develop. Only rarely, and then late in its course does it cause a psychosis by itself.

It is in the early stages of the psychoses of old age that serious errors of judgment are apt to be committed before the patient's irresponsibility has been recognized—such as unjust alteration of the will, poor judgment in financial investments, etc. Early diagnosis is important for the protection of both the patient and his relatives. From a psychiatric standpoint, the treatment of aged individuals revolves about Bleuler's interesting observation: "Senility often becomes a disease only as the

result of the sudden cessation of ordinary attractions of life." Towards the senile person the physician's principal responsibilities are those of (1) cheerful encouragement and (2) regulation of habits and diet. The diet should be well balanced, and adequate amounts of Vitamin B should be supplied. In arteriosclerotic conditions, reduction of salt intake should be encouraged. Alcohol is especially contra-indicated. Sedation is a problem. Warm baths, warm drinks at bedtime are preferred to drugs. If sedatives are imperative, the rapidly acting barbiturates are the drugs of choice since they are quickly eliminated.

Great interest is attached to the trend of mortality from diabetes because it is the one disease of the middle aged and elderly for which an effective means of treatment has been discovered. Yet the mortality rate from this disease is not declining. The rate in 1900 was 9.7 per 100,000 estimated population; in 1919 the rate was 14.9; in 1938 it was 23.8. The increase in the mortality from diabetes has taken place in spite of two important advances in the treatment of the disease—proper management of the diet and the use of insulin. This is based probably on better diagnosis as well as on an actual increase in the number of persons who have developed the disorder. Population age shifts have also played a part. The rapidly growing population of older persons, due to decreasing birth rates and a decline in the mortality of early years, naturally has led to the occurrence of diabetes in more individuals. An increase in certain foreign race stocks particularly susceptible to the disease, especially Hebrews, is another factor contributing to the increased mortality. Certain other forces have exerted an effect on the population which has a direct bearing upon the incidence of diabetes. Scientific

investigation into the etiology of the disease has indicated there are two factors of importance—heredity and obesity. The gradual increase in the number of persons who can command luxuries, who find overindulgence in food and drink, has led to a greater number of overweight persons in the population.

The prevention of diabetes hinges primarily on education. Since the obese person is the most likely candidate for the disease, the maintenance of proper weight must be stressed. Those with a diabetic family tendency particularly should be taught to avoid habits conducive to the development of the disease. Such persons should be warned against permitting the marriage of their offspring into families with the same predisposition.

The diabetic himself must be taught to guard against the development of acidotic coma and infections of the feet, hands, and the other parts of the body. The arterial changes in the elderly diabetic which interfere with normal circulation contribute to the development of gangrene which is an ever present problem with the senile diabetic. The one type which seems so hopeless is the one coming to you complaining of pain in the foot with no history of injury or accident to the foot. The pain arises from the lack of blood to the part due to the contracting of a blood vessel. In some cases early amputation is advisable.

There are other types of gangrene which present a more hopeful picture. In these individuals the lesion follows an accident. There may be no pain, some swelling, the patient is even surprised sometimes to find the toe discolored. The pathology in these cases is different and conservative treatment often brings about a happy result.

Digestive disturbances are common in the aged. Realizing that many of these disturbances are often due to diseases outside the alimentary tract, as for example, heart, kidney, arthritis, etc., these conditions must be kept in mind because of their frequency in old age, and may be the cause of many symptoms referable to the gastrointestinal tract.

The physiologic changes in the gastrointestinal tract as the result of the aging process is not very well understood and the disturbances so diverse that only certain general conditions can be taken up here.

The problem of mastication in the aged often necessitates a radical change in the diet which is high in carbohydrates and low in protein.

While drastic dental surgery is to be avoided as much as possible, I am advocating properly fitted dental plates so these individuals may eat vegetables in sufficient quantities. This, with the aid of mineral oils and enemas, will eliminate catharsis for fecal impaction and constipation so common to senility.

The burning, dry, glazed red tongue so often encountered may be due to lack of fluids, diminished salivary secretions, absence of hydrochloric acid in the stomach, pernicious anæmia, vitamin deficiency, etc., and demand much consideration for proper selection of therapy.

All of us are acquainted with the oft-quoted dictum of Osler, "Pneumonia may well be called the friend of the aged." Taken off by pneumonia in an acute, short, and relatively painless illness, the old escape those "cold gradations of decay" that so often make the last days of life a burden.

Though modern methods of treatment have achieved a remarkable decrease in mortality of pneumonia, the "pneumonia of the aged" continues to show a death rate much out of proportion to the re-

duction in mortality in the whole group of pneumonias.

Age is not a contra-indication of surgery. With proper preoperative preparation, proper selection of anaesthetist, wise surgical judgment, gentleness in handling tissues, the introduction of oxygen therapy, the discovery of insulin and glucose and the safe use of blood transfusions, combined with the many improved diagnostic aids at our disposal, we are so much better able to state the optimum time for surgery.

Deaths from cancer may occur at any age, but the disease is essentially one of the middle aged and elderly. The minimum number of deaths occur in the group of 5 to 14 years of age. From 25 to 34 there is an abrupt increase. From 25 to 55 the mortality among females rises far more rapidly than among males. Thereafter the rate in both sexes increases still further. Throughout the twentieth century the recorded cancer rate among females has exceeded that among males. There is a great deal of discussion as to whether mortality from cancer is really increasing. The number of deaths attributed to cancer has increased, but concurrently there has been a rapid increase in the population. On the other hand the death rate obtained by dividing the number of deaths attributed to cancer by the mean population also shows a strong upward trend. With the declining birth rate and the enormous reductions in mortality rates that have been effected in childhood and in young adults a greater proportion of the population is concentrated in the ages over 45 years, the period when cancer is most prevalent. For these reasons the trend of the reported rates cannot be completely relied upon as a guide to what is actually occurring. The cancer situation is not to be considered alarm-

ing. Investigations concerning the cause, diagnosis and treatment of cancer cases are being conducted in many clinics and laboratories. A number of cancer centers are being maintained throughout the country. During the first eleven months of 1940, 36,078 living patients were registered who showed no signs of recurring cancer five or more years after the institution of treatment. Until more knowledge is gained concerning the cause of cancer, preventive measures of any importance cannot be successfully applied. At present the prevention of deaths from cancer must continue to depend on early diagnosis and effective surgical and radiologic treatment.

With the inevitable just around the corner I must confess old age is not without its compensations. Freedom from responsibility and relief from strain of competition brings leisure for the pursuit of interests for which there never was time. Dr. Lewellys F. Barker of Baltimore describes the pessimistic and optimistic views of old age in this manner:

"Medical and lay writers have differed much in their estimation of the desirability of old age. Many, following the example of the author of *Ecclesiastes*, expressed gloomy views; others have emphasized the brighter side. In pathological old age, the debit side greatly exceeds, without doubt, the credit side; but as to physiological old age some are more pessimistic, others more optimistic. You will recall that Anthony Trollope, in his novel, *The Fixed Period*, suggested the desirability of putting persons painlessly to death when they approached the age of 70. The political economist and humorist, Stephen Leacock, wrote me recently, '... about the only good thing you can say about old age is that it is better than

being dead.' However, in an article entitled, *This Business of Growing Old*, published in the *New York Times* just after his 70th birthday, he said '. . . the old person has some consolation if he has something to pass on—the new life of children and of grandchildren, or, if not that, at least some recollection of good deeds or of something done that may give one the hope to say: 'non omis moriar'—I shall not altogether die.'

"The late Sir William Osler, at the age of 56, when under the emotional strain of saying goodbye to his friends in America, seemed rather pessimistic when he spoke of the relative uselessness of persons over 60. He lived, however, to be over 70 himself and exerted a profound influence in later years upon medicine and upon the general welfare.

"The late Dr. A. S. Warthin of Ann Arbor thought that old age should be met with courage. He emphasized the many compensations of the seventh and eighth decades of life derived from the fact that spiritual and mental functions are prolonged longer than other functions. He counted the old person fortunate, however, if he were blessed with a speedy release before the unhappy days of second childhood came upon him.

"The athlete and sculptor, R. Tait McKenzie, looked upon old age favorably for its gain in physical and mental poise, for its accumulated experience in skills, for its knowledge of ways of saving mental and physical energy, and for the satisfaction of doing well and easily things that younger men have to struggle over unsuccessfully. He valued his contacts with fine minds and personalities as well as his better understanding of fine literature. With Audrey Brown he said: 'I shall grow

old with autumn and not reluctantly'; and he felt it to be his duty 'to maintain his fortitude until the end.'"

Dr. Barker has had the good fortune of living longer than the average man and, because of his inheritance of longevity and of a favorable environment, he has escaped most of the infirmities of old age. His life proves to us that old age need not be lonely and uninteresting. He continues to keep up with progress in medicine, science and travel. He takes trips by air when he can and marvels at the radio, X-ray, television, air conditioning, synthetic textiles and all the other wonderful developments of the period through which he has lived. Because he has continued to be alert to the ever-changing world about him, he is not lonely nor does he feel that he is living on borrowed time. He reads

the latest novels, having thoroughly enjoyed *Gone With the Wind*, and he was deeply moved by the perusal of *Grapes of Wrath*. Two of his pet diversions are crossword puzzles and participation in contract bridge. He says of his life: "I must admit I have 'had a good run' and that I should be willing to 'call it a day.' For my friends, I can wish nothing better than that they may have as many happy memories as I have when they approach the sunset of their lives."

In spite of all any of us can say regarding preventive measures for health in old age, the human body, no matter how good its inheritance or how fortunate it has been in avoiding infections, intoxications and injury, is destined inevitably to decline in functional capacity as it grows older and finally, it must die.

Training Health Workers

By H. W. BROWN, M.D., Dean

School of Public Health

Chapel Hill, North Carolina

THE School of Public Health of the University began the 1941 school year with a student body of 78 and a full-time faculty of 12 members. This marks a new high for the school which had its modest beginning only seven years ago. In 1935, due to the foresight of Dr. Carl V. Reynolds, State Health Officer, and the late Dr. C. S. Mangum, Dean of the Medical School, courses in Public Health were organized at the University of North Carolina. Dr. Reynolds realized that better health service required better health servants. The first courses were taught by the personnel of the State Board of Health, Medical and Engineering School of the University at Chapel Hill. There were no full-time faculty members devoting all of their time to public health instruction.

The following year a Division of Public Health was established at the University of North Carolina. This new division got off to an auspicious start by securing Dr. M. J. Rosenau, a world-recognized leader in public health, as its first director. The University was then designated by the United States Public Health Service as the center for training of health personnel for the Interstate Sanitary District Number 2 extending from Delaware to Florida to carry out the provision of the Social Security Act for the training of health workers. A field demonstration unit was established in the Orange-Person-Chatham District under the able direction of Dr. W. P. Richardson. The co-operation of the Durham City-County Health Department was also enlisted

for the purpose of giving trainees practical experience in rural and urban health administration, and Dr. J. H. Epperson, director of this health unit, arranged useful and practical field work for the students.

In the beginning, due to the emergency created by the need for health workers, the object of the Division of Public Health was to offer short courses adapted to equip physicians and sanitarians for responsibilities of health work. The curriculum covered a 12-week period of intramural study and was followed by a month of field work. The intramural studies consisted not only of lectures and discussions but of laborafofy studies in the various subjects, special demonstrations, health surveys and field work. The short course was given twice yearly, once in the fall and again in the spring of each year. The usual class consisted of about fifty students.

It is realized that a short course of 12 weeks is very useful in the rapid training of the much-needed health personnel. A full year of study is, however, recognized by public health authorities as the minimum necessary for a well-rounded Public Health course. Therefore, in order to give the full year's course for graduate credit, the Division of Public Health was made a School of Public Health and a full-year program of study was inaugurated. The program of courses was so planned that students might take the fall term of 12 weeks alone which may be considered a well-rounded introduction to Public Health. The fundamental stressed in this term also serves as a background for the courses offered the remainder of the year. Realizing that many health workers cannot be spared from their duties for nine consecutive months, the full year's course was arranged into three quarters of approximately three

months each. Students may therefore take only one quarter's work at a time and return later to complete the year's work.

In 1941 a Department of Public Health Nursing was organized with a full year's course for this important group of health workers. Thirty-six registered nurses from three states enrolled for the work in Public Health Nursing this fall.

At present courses are offered which are designed to prepare for work in the following fields: Public Health Administration, Epidemiology, Maternal and Child Hygiene, Syphilis, Parasitology, Public Health Engineering, General Sanitation, Public Health Statistics, Supervision of Sanitary Works, Industrial Hygiene, Public Health Education, Public Health Nursing and Public Health Laboratory. Certificates in Public Health, Masters degrees and Doctors degrees are awarded.

The number of students registering for the course in Public Health each year is as follows:

1935.....	5
1936.....	103
1937.....	92
1938.....	91
1939.....	68
1940.....	73
1941.....	78
<hr/>	
Total.....	510

The slight decrease in student body beginning in 1939 is due to the fact that prior to that time two short courses were given yearly and students remained only 12 weeks. At present a majority of the students remain the full school year.

The School of Public Health serves not only the South but other parts of the country as well. A number of students from foreign countries have been sent to study at Chapel Hill either by their governments or the Rockefeller Foundation.

During the period 1935 to 1941, students were registered from the following states and countries:

Alabama.....	2
Connecticut.....	1
Delaware.....	7
District of Columbia.....	2
Florida.....	63
Georgia.....	90
Maryland.....	2
Massachusetts.....	2
New Jersey.....	3
New Mexico.....	1
New York.....	5
North Carolina.....	219
Pennsylvania.....	1
South Carolina.....	47
Tennessee.....	3
Virginia.....	17
West Virginia.....	39
Brazil.....	1
Peru.....	2
Turkey.....	1
 Total	 510

In the summer, members of the staff of the School of Public Health give special courses to public health dentists from North Carolina and other state health departments. These dentists come each summer to Chapel Hill for refresher courses.

The School of Public Health, in addition to serving the South in postgraduate Public Health Education, serves all three of North Carolina's medical schools. The faculty of the School of Public Health gives the courses in Parasitology, Public Health and Preventive Medicine to the Duke, Wake Forest, and University of North Carolina medical students. This arrangement has worked out to the benefit of all concerned and is unique in medical and public health education.

For the past several years through funds provided by the General Education Board of the Rockefeller Foundation, the State Department of Health and the State Department of Education of North Carolina have coöperated in a health education program for the State. As part of this program there

has been held at Chapel Hill each year a summer school in health for school teachers, principals, and superintendents. The purpose of this work is to prepare teachers to teach health to school children. The staff of the School of Public Health participate actively in this health instruction for the school teachers.

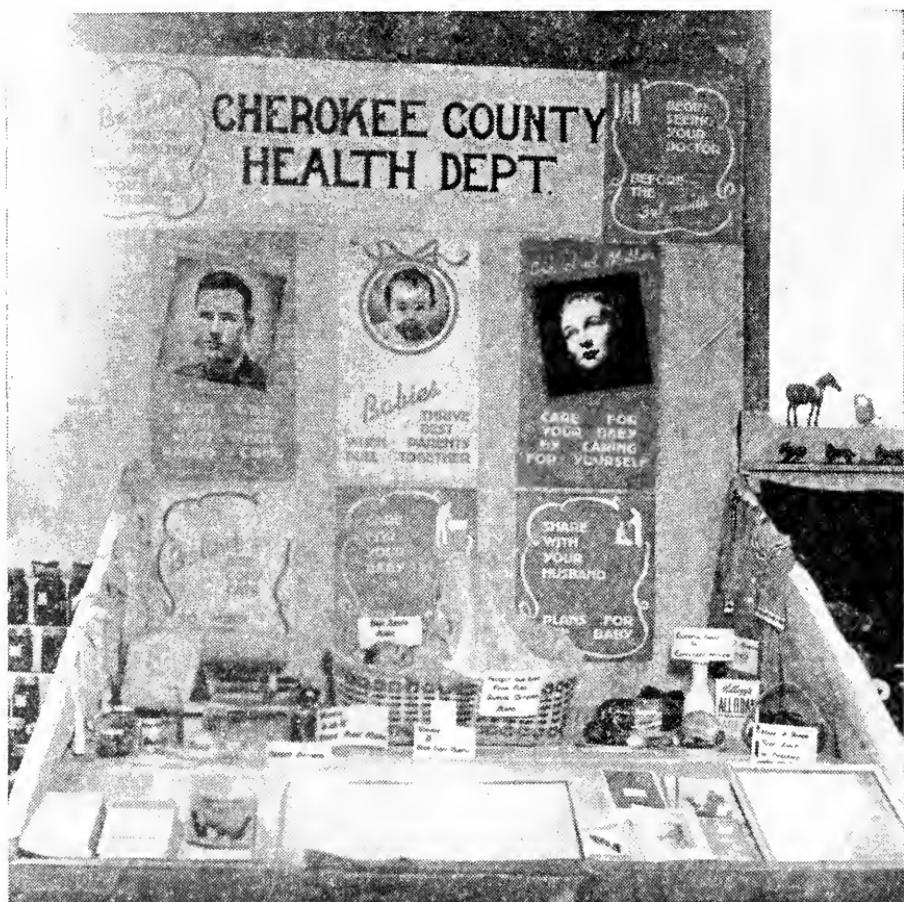
When the space of the School of Public Health was being planned in the new Public Health and Medical School Building a minimum amount was devoted to lecture rooms. All available space was devoted to laboratories and special research rooms, for as far as is possible students learn by doing in the laboratory and through experience in the field. Valuable aid in field work for the students is available through coöperation with the State Board of Health staff which has been close and extremely beneficial. The various members of this Department also give the students in the School of Public Health lectures and exercises in their special fields. Thus the practical experience of the men from the State Department of Health is woven into the fabric of Public Health Education. Members of the United States Public Health Service and other Federal health agencies, as well as the foundations interested in health, give special exercises to the classes.

The School of Public Health also has been aided greatly by Dr. P. P. McCain and the staff of the State Tuberculosis Hospital in the tuberculosis work given the students. Practical field work is further stressed through actual work during epidemics, in connection with water and sewage installations and surveys and special studies in connection with malaria and nutrition problems of the State.

In addition to their teaching duties, each member of the staff of the School of Public Health is carrying on research in his special field. The faculty is interested not only in teaching what is known but also in advancing the frontiers of knowledge through research. A very extensive nutrition study was begun several years ago and it has brought to light much useful and valuable information. Studies on sanitation, industrial hygiene, Syphilis, diseases of infants, malaria, hookworm, influenza are also in progress. Already 72 scientific articles have been published in scientific journals by the faculty of the

school. Funds for much of this research has been made available through the generosity of the Reynolds Fund, the Rockefeller Foundation, and the Fels Foundation Fund.

The citizens of North Carolina and the South owe a debt of gratitude to Dr. Carl V. Reynolds for it is largely through his vision and untiring work that from a small beginning seven years ago the School of Public Health of the University of North Carolina has developed into an institution serving the health need of the State, the South and the nation.



Miss Weaver of the State Board of Health Staff of Nurses sends in this picture of the Cherokee County Health Department exhibit at their recent County Fair. It indicates good designing and excellent work by all of the department personnel.



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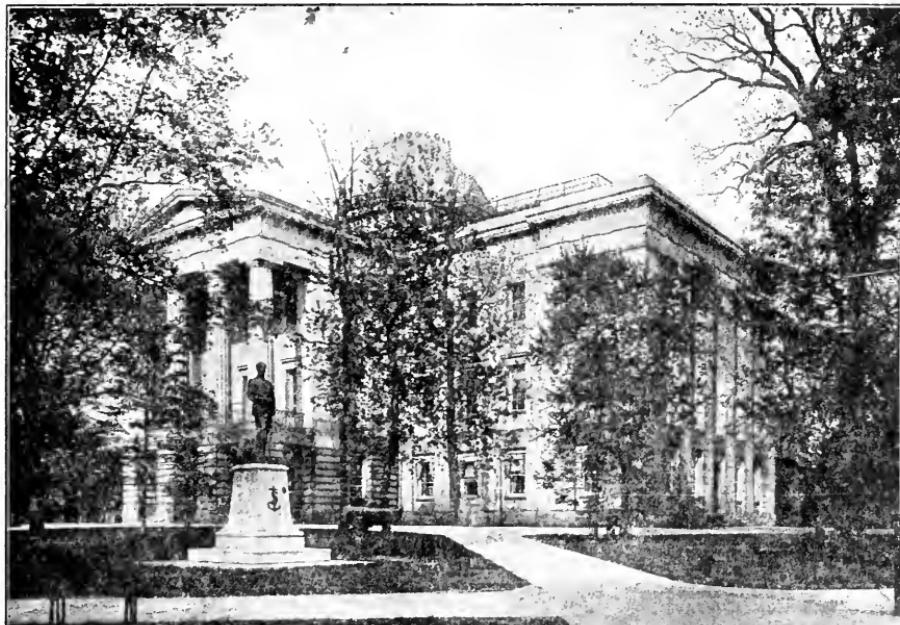
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NORTH CAROLINA STATE CAPITOL

STATE CAPITOL BUILDING AT RALEIGH, ONE OF THE MOST
ATTRACTIVE ARCHITECTURAL STRUCTURES IN THE STATE.
THIS BUILDING IS ERECTED OF NATIVE STONE QUARRIED
ONLY A FEW MILES FROM ITS SITE.

U.S.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months: 5 to 6 months: 7, 8, and 9 months: 10, 11, and 12 months: 1 year to 19 months. 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
The Expectant Mother	Instruction for North Carolina Midwives
Breast Feeding	
Infant Care. The Prevention of Infantile Diarrhea	
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CARL V. REYNOLDS, M.D., *State Health Officer*

JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By THE EDITOR

DUTIES IN WAR TIME IN war time every person in whose make-up there is a spark of patriotism wishes to do something heroic. In the present conflict the disloyal person is a rarity almost outside of our vision. Everyone wishes that his duties call for some performance which would make him an acclaimed hero. There will be many of our citizens who will have that opportunity. For most of us, however, duty will be a prosaic, as well as a stern, task master. Each person can do something useful and helpful. We need not travel to fields afar to perform services which will help win the war.

There are many activities closely related to military service in which civilians can serve. These come to attention readily and are closely akin to heroic duty. It is the less spectacular but equally important tasks that constitute the duties of most of us. Such work as growing foods on our farms or in our gardens can help in manifold ways. Knitting and sewing should be seen even more frequently. Home nursing, first aid and nursing aid should go far to conserve for our armed forces the care needed of trained nurses.

In these times it is even more important that we have efficient operation of all the many and complex activities which are essential to our

national life. Aside from the fundamental soundness of those things in which we believe, is there anything more important than health in winning a war? A recent Gallup Poll revealed that illness robbed the national defense program of 3,200,000 man-days in one month. In other words, the men made idle by illness in one month, if working in one field of endeavor, could have produced 448 bombers or 3,200 light tanks. The Gallup Survey also reported that one half of the American adult population failed to realize the relation of diet to health; that most people in poor health have poor diets; that the typical American family uses only about half the quantity of milk that they should and that only about 42 percent of our people take adequate physical exercise.

In all wars disease has claimed more soldiers than guns or their equivalents. Our fight against disease must proceed. The men or women in our Health Department may render service just as helpful in winning the war as a health worker as it would be possible to do as a combatant or as an officer in the Medical or Sanitary Corps. The Surgeon General of the U. S. Public Health Service and our own State Health Officer are deeply concerned about the possibility that health workers will desert their posts to perform what

seems to be more heroic service with the Army, Navy, or Marine Corps.

Dr. Reynolds, in an appeal to health workers, stated:

"From all indications in the present war, the civilian workers will have as much, if not more, to do with the protection of human lives than will our armed forces. It is my opinion that it behooves every one of our public health workers to remain at his post and do his duty until it is shown by those in authority in our government that it is necessary that we curtail our public health activities and enter into military or naval activities. When they are ready for us and need us they will call us and I am sure that there is no man or woman who will not be willing to heed the call. . . .

* * * *

YOUR DUTY IS IN We will have the **HEALTH WORK** bulk of the people to take care of during this national emergency, and upon how well we perform our duty depends our future usefulness and the welfare of our nation, in so far as the public health is concerned."

The practicing physician, the dentist, the druggist, the graduate nurse will all be needed, both in their home communities and in military organizations. A nationwide committee of professional men will attempt to decide who should go and who should stay at home so that we may avoid some of the errors of the first World War. Then some communities had no doctors or nurses upon whom they could call.

Municipal water plants now more than ever should be in charge of competent operators.

If we will do the best we know how and will try to find better methods of avoiding disease, we as individuals can do much. There will be a shortage of doctors, nurses and dentists. Let us act

so that those who are available will be able to render service to others. Accidents cost much in money, suffering and death. Our Governor called upon our motorists to drive more carefully that the highway patrol be required to investigate fewer accidents and thereby have more time to devote to tasks directly related to national defense. This specific suggestion should be helpful in more ways than one. Especially should it promote thought by those who have the mechanism with which to think. Let us look around for useful things we can do with our hands, our heads or our pocketbooks. Unless each person is willing to do his duty, be it drudgery or an act of heroism, we will not deserve to win the war.

* * * *

UNOFFICIAL AGENCIES Private agencies have been most useful in pioneering new fields. Many of the activities now considered standard practice in our health departments were first undertaken by private agencies and carried on by them until values were demonstrated to the point where the use of public funds could be justified. One of the most interesting endeavors in pioneering which has been our privilege to see in recent years is the Lebanon County, Pennsylvania, Mental Health Clinic. Bankers, preachers, physicians, psychiatrists, civic clubs, hospitals, and newspapers have combined their money and talents and their efforts to demonstrate that mental health is obtainable. Pamphlets and leaflets distributed include: "A Prescription for Mental Hygiene," "A Guide to Hobbies," "Speech Defects," "Mental Health and Religion," "Epilepsy," "Nervousness," "Personal Service to School Children," "Is Your Child Left-handed?", "Sponsors Report," and "Twenty Aids to Mental Health," from which we quote the following:

"Have a plan of living and stick to it. . . . Learn to enjoy your work. Conceive your job as a form of service to others and you will find more happiness in it. . . . Divide each day into three periods: the first for work, the second for recreation, including time for meals, and the third for sleep. . . . Be sure to exercise daily. . . . Work hard and play hard. . . . Eat regularly, moderately, and chew your food slowly. . . . Take good care of your physical health. Arrange to have on every birthday a thorough health examination by a competent physician. . . . Do not worry. If you have no control over the object of your worry, force yourself not to dwell on it. If you can exercise some control over it, make a plan for dealing with it and then carry it out. . . . Have faith in the future. . . . Have faith in the Infinite. . . . Do not dwell in anticipation of good or bad luck. . . . Do not expect too much of life. . . . Avoid prudery. . . . Count a hundred before giving explosive or violent expression to anger or to other forms of emotion. . . . Always bear in mind that, although at times you may be right, at other times you may be wrong in any of your opinions. . . . Respect the opinions of others; they may be right. . . . Know wherever possible the source of your dislikes and the basis of your prejudices; where not clearly understood, question them. . . . Do not worry over poor heredity in your family. . . . When in trouble or in difficulty go to a good friend and talk over your troubles. . . . If your mind is troubled with fears, doubts, or strange thoughts which you cannot easily get rid of, consult your family doctor or a psychiatrist."

If close inspection of the work done in Lebanon County, Pennsylvania, shows their activities to be as good as they

seem to be from this distance, efforts should be in order to imitate it in North Carolina.

* * * *

RABIES The subject with which Mr. Kellogg deals in this issue is one that has required much of his attention during the 33 years that he has been on the staff of the State Laboratory of Hygiene. In 1908 when Dr. Clarence A. Shore was endeavoring to establish this institution upon a firm foundation, he chose Mr. Kellogg as his first scientific assistant. Except for a period of service in the Sanitary Corps of the United States Army during the first World War, Mr. Kellogg has devoted the best years of his life in an intelligent, conscientious, persistent and faithful effort to improve the services rendered by our Laboratory.

In terms of loss of life rabies ranks low as a public health problem. As a producer of emotional stress, strain and anxiety, it is great indeed. For 25 years Mr. Kellogg shared with Dr. Shore the trials and tribulations which rabies brought to the Laboratory. He, therefore, speaks with the authority of Dr. Shore in the message which must be repeated over and over, if we in North Carolina are to be freed from a terror which rabies engenders.

* * * *

COUNTY One of North Carolina's **HEALTH** firsts for which we can **WORK** justly be proud is that she had the first county health department. Guilford County's claim for that distinction is more valid than those of her competitors. Even more important is the position which she now holds among the counties in the development of local health service.

Dr. R. E. Fox's article in this bulletin tells of what North Carolina is doing in this field. He is too modest to state that the rapid expanse in county health

work has occurred during his service as director. His task has been heavy. It is no small matter to keep budgets straight when money from city, county, state, federal, and philanthropic foundations sources may all be working in one county at one and the same time. Much more difficult is it to recruit intelligent, socially minded personnel and train them to join the veterans already in the field whose record of performances set a high standard at which to aim. Then there were programs to be

planned and adapted to the urgent needs of each community. Money, personnel, and plans are important, but performance is what produces results. It required much physical, as well as mental effort to develop our county health program. It did not just happen. Dr. Fox has worked hard and unrelentingly. His task has called for diplomacy as well as firmness. He is much too young to rate an appraisal of his accomplishments, but he is a man to watch. We predict that you will hear more from him.

Some Practical Aspects of the Rabies Problem

By J. W. KELLOGG, *Assistant Director*
State Laboratory of Hygiene
Raleigh, North Carolina

RABIES is an acute infectious disease caused by a virus, which has an affinity for the central nervous system. It is primarily a disease of animals, all of which are susceptible to a greater or lesser extent. While prevalent in animals, the disease in man is rare. The dog is the natural reservoir of infection. This is due to his natural susceptibility and to the peculiar status of the dog, which alone enjoys the freedom from restraint usually accorded to this animal. Of all domesticated and wild animals the dog alone is allowed to roam at large and at the same time have free access to the home, with intimate contact with the members of the family.

The disease is spread from an infected animal by the implantation of the specific virus usually by a bite. Thus infection from a stray dog may be transmitted to the family pet, and thence to unsuspecting children before

symptoms are noticeable in the rabid animal. The period of incubation varies from two weeks to at least 12 months, and the virus may be present in the saliva of the dog for at least three days before onset of marked symptoms. For this reason, a dog should be isolated as soon as his actions become unusual in character.

A change in disposition may be the first symptom. He may be unusually friendly or show distinct animosity towards people or other animals. Slight paralysis either of the throat or extremities may appear. The usual symptoms of a "run-mad" dog are generally known. This is the furious or rabid form of the disease. Less frequently the dog exhibits the "dumb" or paralytic form. In this form other symptoms are less pronounced and the animal hides away, develops paralysis of the lower jaw and dies in about three days. In this form he may appear to have

something stuck in his throat, and attempts to remove the object may result in accidental exposure to the disease. When cats develop furious rabies they are especially dangerous to children, rushing out from a hidden place, and scratching and biting savagely. Due to their habit of licking their paws, cat scratches may be as dangerous as an actual bite. Cattle and other livestock are also susceptible, and due to their size and strength, are capable of doing much damage. The annual loss of valuable livestock caused by bites of rabid dogs must be considerable. Sick animals should receive the attention of a veterinarian. This is an economic problem, but we are interested in the disease mainly from the public health standpoint, and regarding control measures in animals and preventive measures in man.

There are certain measures to be taken when one is bit by an animal. If the animal is apparently normal, and there seems to be no reason to believe that he is mad, he should be confined and observed for a period of from ten days to two weeks to be sure that he was not in the early stages of rabies at the time the person was bit. If at the end of that time the animal is still normal, the patient is in no danger. If the dog should develop symptoms of rabies within ten days of the time of the exposure, there will yet be time to take the anti-rabic treatment, except in cases bitten on the head or face. In such cases treatment should not be delayed, but begun immediately, and stopped if the animal is still normal at the end of the observation period. In no case should an apparently normal animal be killed in order to make a diagnosis of rabies. Failure to find the

diagnostic "Negri bodies" will make it necessary to make an animal inoculation and *delay* the diagnosis. Observation of the animal for a two-weeks period will usually rule out the possibility of rabies in the suspected animal. When one is bit by a rabid animal or by one in which a diagnosis of rabies can be made either by a veterinarian or by the laboratory, treatment should be begun without delay.

If possible, the head of the animal should be brought or sent to the laboratory for examination. In order that a satisfactory examination may be made, care should be taken not to injure the brain of the animal. If it is necessary to shoot the animal, care should be taken to avoid shooting it in the head. The brain is soft and fragile, and if the animal is killed by a blow on the head it may be impossible to make a satisfactory examination. The head should be removed and packed in ice for shipment to the laboratory. Failure to observe these precautions may prevent or delay a laboratory diagnosis. Whenever decay or mutilation interferes with the laboratory examination, one must depend on the history and symptoms of the animal in determining the advisability of treatment of those exposed.

The question as to the advisability of treatment must be decided in each case, but in general we may say that only those who are actually bitten by a rabid animal should receive the anti-rabic treatment. This includes those who have fresh cuts or abrasions exposed to the saliva of a rabid animal, or from one which escaped, or from one in which for any reason definite diagnosis cannot be made. The possibility of infection through cuts or abrasions

more than 24 hours old, or from drinking the milk of rabid cows is very remote. Whenever it is considered wise to take the antirabic treatment, it should be begun as early as possible. The relatively long incubation period in man enables us to complete the treatment and establish immunity to the disease. Bites on the face and on the hands are more dangerous than those on the body and lower extremities. Bites received through the clothing are less dangerous than those on the exposed skin. Failure to start treatment promptly is the chief cause of failures. The fact that paralysis following antirabic treatments occurs more frequently than does rabies in persons not actually bitten is sufficient reason for not giving the treatment to those not actually exposed. On this account, and also because of the rare occurrence of rabies in man, we do not advise treatment except for those actually exposed. At present we distribute two courses of treatment for people. One consists of 14 doses for ordinary bites or slight exposures and the intensive course of 21 doses for those severely bitten. The charge is the same for either type, \$5.00. The period of immunity following antirabic treatment persists for six to nine months at least. We do not supply treatments for dogs or other animals. During the past year (1940) we distributed 610 courses of treatments.

During that year rabies appeared in approximately half of the counties in North Carolina. Of the 1,132 heads examined 389 showed evidence of rabies. Of those proven mad, 339 were dogs, 30 cats, 12 from other livestock, 17 fox and one human. This was from the only human case reported during the

year. Rabies is prevalent in certain definite cycles in North Carolina. We are now at the low ebb of the cycle, the last high having occurred in 1934-1935 when over 1,000 animals were found positive and 2,000 or more treatments were distributed.

Now seems to be the time to institute preventive measures, curb the prevalence of the disease and prevent the normal increase during the years to come. For this purpose there are certain specific control measures which should be adopted in North Carolina. First: A Statewide licensing system in which all dogs must be licensed annually. The license tag must be affixed to collar of dog and worn at all times. Second: The destruction of all unlicensed and stray dogs. Third: Destruction of any and all dogs known to have been bitten by a mad dog. Fourth: Vaccination of dogs should be considered only as an adjunct to the licensing system, and dogs so vaccinated should not enjoy any special privileges because of such vaccination. Fifth: Strict quarantine of all imported dogs for a period of six months. Strict observance of these precautions would be effective in eliminating rabies from the State within two years. The advisability of giving valuable animals a preventive course of vaccine as an alternative to their immediate destruction must be determined in each instance. However, we know that such measures are not an absolute protection, due to the extreme susceptibility of the canine species and the limited value of the present types of vaccine. For these reasons we do not advise treatment of dogs known to have been bitten by rabid animals.

Progress Made in Local Health Work Since Availability of Social Security Funds

By R. E. Fox, M.D., Director

Division of County Health Work, N. C. State Board of Health
Raleigh, N. C.

WITH the availability of Social Security funds, there has been a more or less rapid growth in the further development of local health service as shown by the fact that for the fiscal year 1934-35 we had 52 counties participating in health programs, exclusive of cities. There were employed 45 health officers, 84 public health nurses, 59 sanitarians, and 50 clerks and other personnel. Dental programs were operated in these 52 counties totaling 493 dental weeks. These 52 counties represented a total population being served by local health service of 1,822,961 out of a State population of 3,170,276. The total amount of money being expended was \$485,618. Of this amount \$370,375 was local appropriations, the State was contributing \$53,986, the remainder being contributed by other agencies, the majority of which was Federal funds.

Social Security funds became available in February, 1936, and from that time on, there was a rapid growth in local health service. By the fiscal year 1940-41 we had 81 counties and five cities participating in these Federal funds. The population being served in the counties and cities was 3,132,192 out of the State's total population (1940 census) of 3,571,623. Employed in these local units were: 71 health officers or assistants, 297 public health nurses, 132 sanitarians, 167 clerks and other personnel, and the number of dental weeks had increased to 1,322. There was being expended a total of \$1,708,228; of this amount \$993,381 was local appropriations; for this particular year the State contributed \$109,000; the remaining \$605,847 was being con-

tributed by other agencies, mainly the U. S. Public Health Service, the Children's Bureau, and the Reynolds Foundation; smaller portions being contributed by the Tennessee Valley Authority, the Office of Indian Affairs of the Department of the Interior, and the University of North Carolina. This represented a change in the per capita expenditure for health work of more than 100 percent since the per capita expenditure in 1934-35 was 26.6 cents and for 1940-41 it was 54.5 cents.

The additional personnel added under this program has been trained personnel. The training of personnel has been made one of the keynotes of the program and we believe there is no question but what the citizens appreciate the services rendered by trained personnel as against the services rendered by nontrained personnel. This has tended to stabilize tenure of office and the local boards of health have coöperated practically 100 percent in the program of having qualified health workers to perform the services.

During this time the content of the public health program has changed. The average program, where there was a health officer and one nurse in 1934-35, consisted largely of school work and immunization against communicable diseases, together with such routine matters as the statutes required. Many of the local health departments were without the services of sanitarians. At present, there is no health unit being served but what has the services of a health officer, two or more public health nurses, one or more sanitarians, and adequate clerical service.

(Continued on page thirteen)

Nursing Program in National Defense

By AMY LOUISE FISHER, R.N.

Consultant in Public Health Nursing

Division of County Health Work, N. C. State Board of Health
Raleigh, N. C.

THE North Carolina State Nursing Council on National Defense is made up of a group of 21 women representing all branches of the nursing profession and three physicians who have been asked to serve in an advisory capacity. Plans have been made for carrying out their part of the nationwide program.

There will be a need for 50,000 student nurses to enter training each year. This year there are 45,000, a deficit of approximately 5,000. January has been designated as National Nursing Month. During this month someone will visit the high schools and the colleges in the interest of recruiting student nurses. There is a need for more nurses—good nurses. If you are a young woman between the ages of 18 and 35, interested in answering this call for more nurses, please select with a great deal of care the school of nursing that you expect to enter. Be sure that you get the sort of training that will enable you to qualify for any branch of nursing which you may choose to enter. There are openings in the public health field for young women of educational background who have had training in schools of nursing connected with hospitals large enough to give a well-rounded training.

At the meeting of the Red Cross State Nursing Committee Miss Blanch Stafford, Chairman of the Red Cross Nursing Service in North Carolina, gave out information that the need for nurses is so urgent that young nurses may now send in their Red Cross application blanks and be accepted for Army or Navy service as soon as they have

passed the State Board of Examinations without the delay of waiting for certificates to be issued and duly registered.

The North Carolina Nursing Council on Defense will coöperate with the local Red Cross chapters in training volunteer Red Cross Nurses' Aides, also in giving the Red Cross course in Home Nursing and First Aid.

In many counties in the State courses are already being given in First Aid. Public health nurses and other authorized instructors are teaching classes in Home Nursing. The maternal and child health centers conducted by county health departments offer group instruction; more of this type of service will be offered by health departments in order to meet the needs of the present emergency. We invite you to take advantage of these courses as well as of all the facilities of the health departments. Now in this national emergency it behooves every American citizen to see that he or she is physically fit and ready to do his or her part. This is a good time to get defects corrected, to see that expectant mothers have good prenatal care either by private physicians or through maternal and child health centers. The preservation of the health of the next generation is doubly important now.

By this time you probably have already registered with the Office of Civilian Defense for volunteer service. The North Carolina Nursing Council on National Defense is urging all graduate registered nurses to register for such volunteer service. Each of us will want to do our part.

Housing the Health Departments

By MARY S. BATCHELOR, *Field Representative*

State Board of Health

Raleigh, North Carolina

THE past few years have seen Public Health maintain a steady forward march in many fields, but in no field has the progress been more widespread nor more badly needed than in the matter of housing the health departments.

Six years ago most of the local health departments were lodged in inadequate quarters. A great many of them boasted no more than room-and-a-half space in the back end of the county courthouse, sometimes reached by winding stairs of breath-taking steepness, sometimes by a basement corridor that had never seen the light of day. Light was at a premium. Fuel for the obsolete stoves had to be carted up or down stairs. The water supply was hopelessly inadequate. There was not sufficient space for the personnel employed. During court week, the entrance to the health department might be surrounded by loungers and one had to pick one's way carefully to avoid enthusiastic tobacco chewers. The surroundings were anything but inspiring and the actual offices far from satisfactory.

But in six years the picture has changed considerably. One after another the local health departments have moved out of undesirable quarters into more spacious ones. Modern lighting has increased the efficiency of the personnel; automatic heating has saved their time; good ventilation has increased their well-being. Efforts have been made to arrange fairly private entrances to the health departments so that loungers do not swarm around the doorways nor is the personnel interrupted by a constant stream of people looking for other departments.

In certain instances whole floors of newly constructed buildings have been turned over to the health departments. Architects have consulted with health officers to the end that the quarters designed for them would be not only adequate, modern offices, but, which is more important, adequate, modern health offices.

The Forsyth District Health Department has recently moved into the second floor of a new building, the ground floor of which is occupied by the county welfare department. The building is of the most modern type. The lighting is excellent. The walls are painted a soft green which does not cut down the light but which helps to eliminate glare. The darkroom is the only room in the building without cross-ventilation.

A unique feature of these offices is that it is possible, by means of removable wooden partitions, to have large rooms or small ones at will. At present each of the larger offices has two doors leading into the central hallway. If it is desired to have two smaller offices in place of one large room, the partitions can be set up within the large room and direct entrance into the smaller offices will be provided by the hall doors.

Dr. Hege and his staff are very much pleased with their new home.

Halifax County is another which has moved the health department, not only to a new building, but to another town. From their former third-floor location over the bank in Weldon, Dr. Young and his staff have moved into a wing of the new county building in Halifax, North Carolina, which is the county

seat of Halifax County. They are most enthusiastic about their new quarters and they have reason to be. They had done the best they could with the quarters in Weldon, but in spite of all that could be done, the offices remained crowded and undesirable.

A recent visit to Halifax County showed the staff of the health department busily engaged in placing new equipment and settling down.

Dr. Fryer, Health Officer of Rockingham County, reports that new quarters for his department are well under way in the new county building which is being constructed in the town of Spray. Here again the move will be from one town to another, since the present offices of the health department are located in Leaksville, but the change will not be so drastic since the towns of Spray and Leaksville are almost indistinguishable, one running into another with no apparent dividing line. Dr. Fryer and his staff are anxious to see the new building finished. They will have a whole wing to themselves and separate entrances will be made.

Craven County celebrated the opening of their new offices with a housewarming, to which Dr. McGeachy invited friends from surrounding counties as well as many from the State Board of Health. The reports from those who attended indicate that the quarters are highly satisfactory. The Craven County Department has been needing space for some time, but with the increase in personnel attached to the defense areas, the need for additional space became acute.

Beaufort, Caldwell, Columbus, and Edgecombe are four more counties which have moved during the past year. Edgecombe moved into quarters in a new building near the postoffice in Tarboro, and Columbus into quarters provided for them in the new county hospital at Whiteville. Both Beaufort and Caldwell moved into renovated quarters.

There have been many more changes in the past six years. Catawba, Cleveland, Cumberland, Rocky Mount, Winston-Salem, Gaston, Granville, Hertford, Lenoir, Person, Robeson, Sampson, Stanly, Wake, Watauga and Yancey are some of the departments which no longer occupy the quarters which were theirs six years ago, and in practically 100 percent of the moves the change has been for the better.

The news from Durham County is that the health department expects to be in their new building early in 1942. We understand that Dr. Epperson and his staff will have an entire building to themselves, and know that they are anxiously awaiting its completion.

Where new quarters have not been available to the health departments the changes that have been made in existing quarters have helped to bring them nearer to what is required. The judicious application of paint has helped to bring dark corners out into the light. Linoleum has been used to cover unsightly and hard-to-clean floors. Lighting fixtures have been changed to more modern types. Shelves and storage space have been added. Sometimes doors and windows have been cut to

make passage from one office to another easier, or to provide for additional light.

On a recent visit to Cabarrus County, Dr. Bethel was showing the plans for an addition to his department. In Greene County a few weeks ago Dr. Ellinwood was proudly showing the extra room he had secured for his clinics. Surry County's enlarged quarters are proving highly satisfactory.

There are many other departments in which repairs have made usable, fairly satisfactory offices out of unde-

sirable ones—so many that it is impossible to name them all.

There is hardly a health department that has not made a valiant effort to better its housing. The success they have met is encouraging and stimulating and bears witness to the thoughtfulness and ingenuity of the health workers. It would also seem to indicate, since public funds have been utilized for the construction of new buildings, that public health has public approval behind it.



ONE YEAR OLD

Reared in accordance with health literature, Mae Reynolds, daughter of Mr. and Mrs. J. H. Reynolds, Oxford, N. C., namesake of Miss Mae Reynolds, staff of State Board of Health.

PROGRESS MADE IN LOCAL HEALTH WORK

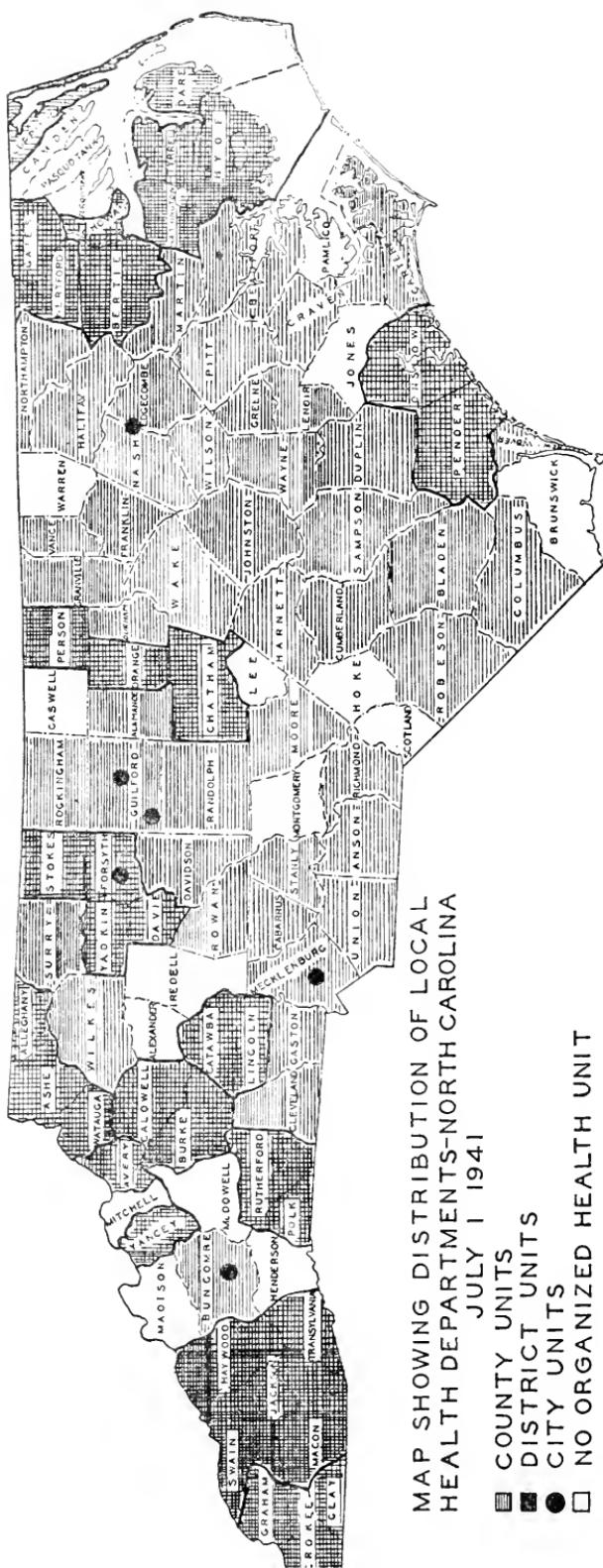
(Continued from page nine)

The main developments in the program have been in the field of maternity and infancy under the leadership

of Doctor Cooper, and in the field of venereal disease control under the leadership of Doctor Knox. Many additional clinics rendering these services have been established, as well as services for crippled children. The same growth has been shown in the field of sanitation. The public health nursing program reaches many more people today than it has ever reached in the history of public health work in North Carolina. All of this expansion has been made possible through the availability of funds and the training of health workers to perform a better job. None of these programs are as yet considered adequate to meet all the demands, but the citizens of North Carolina seem to appreciate the service and at no time has there been a discontinuance of a health service within the past six years.

The following table will reveal the numerical and financial record of our local health services from 1932-33 to 1940-41, inclusive.

The following map shows the location of the full-time county, city and district health departments in North Carolina as of July 1, 1941.



MAP SHOWING DISTRIBUTION OF LOCAL
HEALTH DEPARTMENTS-NORTH CAROLINA

JULY 1 1941

- COUNTY UNITS
- DISTRICT UNITS
- CITY UNITS
- NO ORGANIZED HEALTH UNIT

Books

New or nearly new books and booklets which may interest our readers. We have not read them but some may be worth buying—others worth borrowing:

The Man Who Lived for Tomorrow—

A biography of William H. Park, M.D., by WADE W. OLIVER. E. P. Dutton, New York; 507 pp.; \$3.75.

A Yankee Doctor in Paradise—S. M. LAMBERT, M.D. Little-Brown Company, Boston; 393 pp.; \$3.00.

Dr. Wood, Modern Wizard of the Laboratory—WILLIAM SEABROOK. Harcourt, Brace & Company, 383 Madison Avenue, New York; \$3.00.

The March of Medicine in 1941—The New York Academy of Medicine Lectures to Lay Audiences. Columbia University Press, Morningside Heights, New York, N. Y.; \$2.00.

Living Biographies of Great Scientists—HENRY THOMAS and DANA LEE THOMAS. Garden City Publishing Company, Garden City, N. Y.; \$1.98.

Plain Words About Venereal Diseases—THOMAS PARRAN, M.D., and R. A. VONDERLEHR, M.D. Reynal & Hitchcock, New York, N. Y.; \$2.00.

Clara Barton, Daughter of Destiny—BLANCHIE CALTON WILLIAMS. J. B. Lippencott, Philadelphia; \$3.50.

The Doctors Mayo—H. B. CLAPESATTLE. The University of Minnesota Press, Minneapolis; 822 pp.; \$3.75.

American Doctors of Destiny—FRANK J. JIRKA. Chamberlain Book Service, 1131 West Layola Avenue, Chicago; \$2.50.

Magic in a Bottle—MILTON SILVERMAN, Ph.D. Macmillan Company, New York; 314 pp.; \$2.50.

The Microbe's Challenge—FREDERICK EBERSON, Ph.D., M.D. The Jaques Cattell Press, Lancaster, Pa.; 354 pp.; \$3.50.

Health Education in Relation to Venereal Disease Education—MAURICE A. BIGELOW. American Social Hygiene Association, Inc.; 32 pp.; 25c.

Social Education and Youth in Defense Communities—MAURICE A. BIGELOW. American Social Hygiene Association, Inc.; 16 pp.; 10c.

An Approach to Sex Education in Schools—American Social Hygiene Association, Inc.; 8 pp.; 10c.

RECOMMENDATIONS BY COMMITTEE ON WATER SUPPLY OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

1. In responsible key positions employ only those persons who by training and experience are thoroughly qualified to carry out intelligently the important duties of their positions. Let all appointments to water department positions be made on the basis of fitness and merit and not as reward for political affiliations.

2. Arrange for critical studies of all water works systems by qualified persons with the view of effecting whatever improvements in physical or operating features as are determined to be necessary from the standpoint of war time protection and positive assurance of adequate and safe water at all times under all possible conditions.

3. Comb water supply systems thoroughly for cross-connections, eliminate those which are dangerous and place those which are permitted to continue under systematic control and thorough supervision.

4. Provide for an adequate sampling program covering the distribution system to furnish positive proof of the continuing safe quality of water as delivered to consumers and as a means for detecting dangerous conditions over the distributing system which require correction and which otherwise might escape notice. Wherever possible develop local water laboratories under competent management to enable the proper expansion of sampling program and routine tests essential for efficient plant operation.

5. Provide for effective disinfection as the minimum treatment for all untreated water supplies which now fail to meet the ordinarily accepted bacteriological standard for drinking water. Provide treatment or retreatment of water wherever in the course of its flow from source to consumers it is exposed to secondary contamination in open storage reservoirs.

SCHOOL OF PUBL. U. N. C.
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

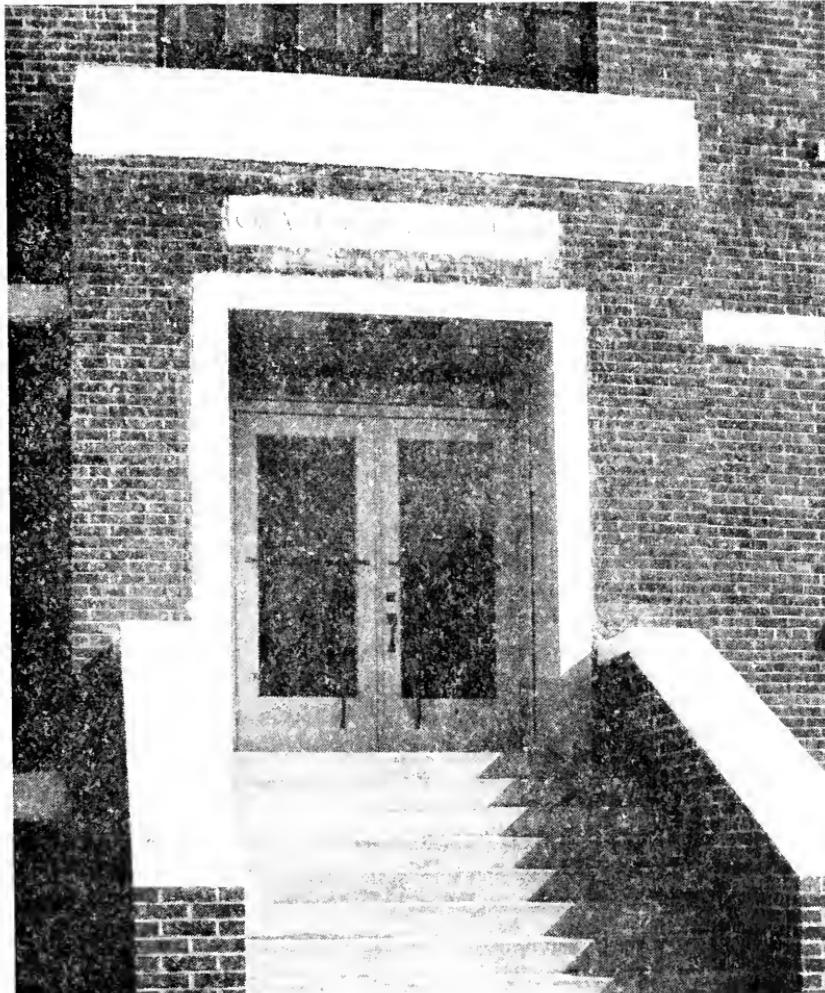
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MARCH, 1942

No. 3



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months. 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)	Diet List: 9 to 12 months; 12 to 16 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
The Expectant Mother	Instruction for North Carolina Midwives
Breast Feeding	
Infant Care. The Prevention of Infantile Diarrhea	
Table of Heights and Weights	

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THE Health Bulletin



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Vol. 57

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CARL V. REYNOLDS, M.D., *State Health Officer*

JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By THE ACTING EDITOR

ORAL HYGIENE BUILDING

After much long and arduous planning and in spite of discouragements and disappointments ground was broken for the Oral Hygiene Building on January 1, 1941. The last Thursday in November, 1941, was Thanksgiving for the Division of Oral Hygiene—for on that day they moved from crowded quarters in the State Board of Health Building into the first and only building devoted exclusively to a State Division of Oral Hygiene.

In dimensions the building is thirty-three by forty-five feet. It is a fire-proof construction faced with red brick, and has a white cast-stone trim. There are two stories with a full size basement, half of which is above ground. While this gives the Division much more space there is no wasted or extra room, for the building was planned to fit the needs of the Division. On the first floor are the offices of the Director, the Educational Consultant and the clerical staff. From the basement comes the hum of the mimeograph machine running almost constantly, turning out thousands of sheets of educational material, including "Jack's

Travelogue." Dental supplies are stored in the basement and from there distributed to the staff dentists for use in their work in the schools of the State. The second floor is to be devoted to a Dental Health Museum and Little Jack's House.

This building is a lasting tribute to the vision and untiring efforts of Dr. Ernest A. Branch. It is another definite advance in the physical equipment available for use in the endeavor to promote the health of the people of North Carolina.

* * * *

HISTORY As far back as 1910 the North Carolina Dental Society had a standing committee on Oral Hygiene. In season and out of season this Committee endeavored to devise some plan which would cause greater numbers of the people of the State to have a knowledge of the importance of mouth hygiene and ways to obtain that objective. Finally in 1918 they met with definite encouragement. On June 19th of that year the Society began its annual meeting at Wrightsville Beach. On this program was a paper by Dr. G. M. Cooper, then

director of the Bureau of Medical Inspection of Schools, North Carolina Board of Health.

The subject chosen by Dr. Cooper was "Preventive Dentistry" with paragraph headings: Necessity for Prevention, Frequency of Dental Decay, Proof That This State of Affairs Can Be Prevented, Results of Neglect of Teeth, Need for Dental Education, A Plan of Campaign, Logic of This Procedure, Coöperation Between Medical and Dental Professions, Support of Leading Dentists An Absolute Essential, Difference Between Trade and Profession, and Reward. Dr. Cooper made a logical presentation which met with a cordial and intelligent response. Hardly had he finished speaking than Dr. J. Martin Fleming, a leader in the dental profession since the turn of the century, presented a resolution: "Resolved, That the North Carolina Dental Society heartily endorse the plan of the State Board of Health as outlined by Dr. G. M. Cooper, and that we pledge him the loyal support of this Society."

As a quick sequel the first school dentist started work in Nash County on July 10, 1918.

The January, 1919, Special Bulletin No. 166 was devoted exclusively to Oral Hygiene. In the Foreword Dr. Cooper stated: "We have endeavored to set forth in this pamphlet a detailed record of the first effort ever made in North Carolina or, so far as we know, anywhere in the United States, to provide at public expense traveling dental service free of cost to rural school children. The work was inaugurated by the Bureau of Medical Inspection of Schools, largely in the nature of an experiment, as an integral part of the "follow-up" work of the inspection. We have learned that helping little children is one of the greatest things in the world."

Dr. J. N. Johnson, president of the North Carolina Dental Society in 1919, invited Dr. Cooper to speak in the annual meeting at Asheville, which began on June 25th of that year. In part Dr. Cooper said: "In the first place, I want to especially thank your President, Dr. Johnson, and the committee for the courteous invitation extended to me to again appear before the North Carolina Dental Society. Almost the sole speech I have to make today is to express the warm appreciation of myself personally and of all of the State Board of Health officials for the royal manner in which the North Carolina Dental Society to a man supported the efforts of my department during the past year in undertaking to arouse the people of the State of North Carolina to a more intelligent sense of the necessity for the teaching of oral hygiene and dental prophylaxis to the school children of the State.

"When I appeared before your meeting at Wrightsville last June, I may confess now that I had many misgivings, but they were wiped away when Dr. Fleming voluntarily, and without any knowledge on my part, introduced the resolutions offering support in this work, and which were unanimously adopted. From that moment dates the successful beginning of what is destined to be a great work for the children of the State. . . . I would like to say here that Dr. Edward J. Wood, the medical member of the State Board of Health who will be supplanted by a dentist, voluntarily withdrew and asked the executive officer of the Board of Health to convey to the Governor his support and appreciation of the necessity for the appointment of a dentist on the Board, thereby showing the spirit of the big man which he is."

Thus the foundation of oral hygiene was securely laid, based as it was upon the precept that public health education was its most important objective. With mutual understanding and confidence, together with enthusiasm and hard work, oral hygiene was nurtured and has thrived.—From one dentist in July, 1918, to thirty-two in July, 1942, from service in one county to one hundred counties, from one of several activities in a Bureau in 1918 to a Division in 1931 is a genuine accomplishment. Such growth could only come from public appreciation of the services rendered. But growth has not changed the original concept of oral hygiene. In the beginning its objective was public health education—its present objective is public health education. New information has been obtained, new methods have been advanced, and new children have entered upon the stage of life, but education is still the goal.

* * * *

DR. BRANCH AND STAFF Dr. E. A. Branch was a good dentist when he began his public health career. He has kept abreast of the scientific progress in his profession. Since Dr. Branch's task, however, was primarily education, he felt that he should also hold in his hands the tools of the educator. He took college courses in psychology, pedology, visual education, public speaking, and the like. He studied continuously methods of perfecting his technique. That he has succeeded is attested by all who know him or his work. He has had nation-wide recognition for a splendid accomplishment.

Feeling that every public health worker should be informed concerning the broader aspects of the entire field of public health, and be given special training for the specific duties which he is expected to perform, Dr. Branch worked unrelentingly for a school for

public health dentists. His efforts were rewarded in 1936 with the establishment of the Institute of Public Health Dentistry, in the Division of Public Health of the University of North Carolina, the first of its kind in America. Thus the Division of Oral Hygiene has contributed three North Carolina Firsts, the first Oral Hygiene Program of its kind, the first School for the training of public health dentists, and the first Building to be used exclusively for state-wide oral hygiene work.

The school dentists are young and are well trained in the scientific aspects of dentistry. They attend a school especially designed for them to broaden their public health viewpoint and to train them to be better teachers of oral hygiene. In ten years these dentists have examined 1,124,043 school children and treated 602,338 of them. These same men have given 28,128 lectures to 1,331,762 children. These are big numbers, but the oral hygiene program is big enough to do a sizeable piece of work. We should not fail to mention that many of these lectures are now made in classrooms where the pupils come in more intimate contact with the dentists than when the talks are given in an auditorium. Then, too, the pupils have a feeling that instruction in small groups makes the information more nearly their own personal property than when they receive it in large groups. Their activities are outlined in Dr. Branch's article in this issue of the BULLETIN. There is no more enthusiastic group of health workers to be found anywhere. Neither are there any who make greater financial sacrifices, in order to preach the gospel of public health. There is not a single one of them who could not make considerably more money in the pri-

vate practice of his profession. To them public health and the people of North Carolina owe much in gratitude for service well performed.

To "Little Jack," Miss Mercer has paid tribute in this BULLETIN. Although a puppet, this little boy is the most popular public health worker in North Carolina. If he were not doing so much good work, all living employees of the State Board of Health would be jealous of him. "Little Jack" receives more mail than any other person who works in Raleigh. It is truly remarkable how well this puppet can teach. Back of him, however, is that famous institution, "The Carolina Playmakers." Young people trained in this organization operate "Little Jack" and his cast, and make them perform according to high professional standards. Carefully selected script together with first-class equipment combine in putting across to the school children of North Carolina a valuable lesson in oral hygiene. Since he started his performances in 1935, he has played before audiences totaling 1,046,017.

If there is any better word than zeal to describe the Division of Oral Hygiene it does not occur to us at the moment. Dr. Branch's eyes twinkle when he gets a new idea—he gets them

so fast that his eyes must get tired of twinkling. Yet he has his ideas well trained to move in an orderly manner like well disciplined troops. He makes his ideas work. His untiring efforts have carried his message into every county in North Carolina. Years ago he realized that school teachers were his aides and allies. He found a way to present his case at the colleges where teachers are trained. His staff has prepared mimeographed letters, leaflets and booklets; notably *"Teaching Mouth Health In North Carolina," by Miss Carolyn Mercer, which have made it easy for teachers to teach oral hygiene.

If there is a single method of education which Dr. Branch has overlooked he would like to hear about it. His is truly an all-out campaign for better health and happier people. That he has succeeded in pleasing the dental profession is attested by the tributes of Doctors Fleming and Poindexter. The school people and the public show their appreciation by letters and newspaper articles. Health workers everywhere make a very respectful bow to our Division of Oral Hygiene.

*This book has won for Miss Mercer honorary membership in the North Carolina Dental Society.

Teeth

By STAFF MEMBERS

Division of Oral Hygiene, North Carolina State Board of Health
Raleigh, N. C.

FOUNDATION TEETH. At birth a baby's mouth is void of teeth. Every mother knows this. But every mother does not know that just beneath the gum surface in her baby's mouth are twenty little teeth, ten in the upper jaw and ten in the lower jaw. These teeth begin to make their appearance when the child is between

five and eight months of age, or as soon as the child is ready to start the mastication or chewing of his food.

These teeth have many names, baby teeth, milk teeth, temporary teeth and deciduous teeth. The proper name for these teeth is FOUNDATION, since in many instances the child's general health as well as his permanent teeth

are dependent on the condition and care of these early teeth.

These teeth are often neglected by parents because their importance is not fully appreciated. It is just as important for a child to chew his food properly as it is for an adult. More especially is this true since the child is in the stage of growth and development.

The permanent teeth are thirty-two in number and they are larger than the foundation teeth. In order to accommodate these large and more numerous teeth it is necessary for the jaws to grow and expand. Here, the foundation teeth play an important part as space retainers, in proper development of the jaws and in helping to guide the permanent teeth to their proper positions.

Some of these foundation teeth should remain in the child's mouth until he is 9 to 11 years of age. For this reason it is of utmost importance that as soon as he has all of his foundation teeth the child be placed under the care of a competent dentist. Thus, any small cavities may be filled and other defects may be corrected before irreparable damage is done.

The Most Important Tooth

The first permanent tooth to make its appearance in a child's mouth takes its position just back of the foundation, or baby teeth. There are four of these teeth, two in the upper jaw and two in the lower jaw. These teeth, which appear when the child is about six years of age, are known as the six-year molars. It is not difficult for the mother to determine which are the six-year molars in her child's mouth. All that she has to do is to start with one of the front teeth and count back six teeth, the sixth tooth to be counted is the six-year molar. This rule applies to either the upper jaw or the lower jaw.

It is the opinion of dentists that these six-year molars are the most important teeth in the child's mouth. They are referred to as the keystones of the dental arch. Each of them is a determining factor in the positions of the other permanent teeth and, therefore, in the symmetry of the jaws and face.

Unfortunately, these six-year molars are frequently mistaken for foundation or baby teeth, and, because of the mistaken notion of many people that baby teeth should receive no dental attention, they are allowed to decay until they are past saving and have to be extracted. A greater crime against the dental perfection of the child could not be committed. If one of these teeth has to be extracted, every other tooth in the mouth, both upper and lower, shifts in its socket to compensate for the space.

There are other ill effects from the failure to take the proper care of the six-year molars. Children whose six-year molars are badly decayed often have poor digestion. These teeth are so sensitive that proper chewing is impossible, hence the food is swallowed without being thoroughly masticated. Furthermore, these children, in a large majority of cases, suffer from severe toothache which robs them of sleep. It is the profound duty of every parent to see that his child does not lose these priceless teeth.

Three Minutes Twice a Day

Cleanliness of the mouth and teeth is the greatest of all prophylactic measures that can be instituted against dental decay. This statement needs no verification, for it is very obvious that dental decay rarely occurs upon the smooth surfaces of the teeth that are fully exposed to the friction of foods in mastication and the cleansing action of the tongue, lips and cheeks.

However, this does not mean that the toothbrush is a cure for all dental

troubles. But once good teeth are built the toothbrush is one of the most important allies in dental conservation, provided it is properly used for Three Minutes Twice a Day.

The care of the mouth is a lifelong job. Time spent in teaching children the best method of caring for their mouths is time well spent. Parents and teachers can do much by teaching the children to clean their teeth. There are two factors of vital importance: first, that children be taught to brush their teeth in the right way, and second, that this method be practiced until it becomes a habit. Many children brush their teeth carelessly and in a manner that injures the gums.

It is agreed by most authorities that a small toothbrush with widely spaced, fairly stiff bristles is best for small children. These small brushes are easily handled and they can reach any part of the mouth. Of course it is desirable for the child to have two brushes and for him to use them alternately. It is wise to provide young children with a dentifrice that has a pleasant taste since this will encourage its use.

It is advisable for older children and adults to follow the advice of a dentist as to the type of brush suited to their individual needs. This is especially true since there are so many different sizes and shapes of mouths and dental arches.

The proper technique of brushing the teeth can best be demonstrated by the dentist. The teeth should be brushed away from rather than toward the gums. In other words, the teeth should be brushed in the same direction in which they grow. The inside surfaces of the teeth and the tops, or chewing surfaces, must not be neglected.

The value of devoting enough time to the performance of this duty cannot be overestimated. There is no better

investment of time and effort for an individual than the proper use of his toothbrush Three Minutes Twice a Day.

Foods

Malnutrition is the most serious health problem facing the American people today. This is true, regardless of the fact that we have the highest standard of living in the world. This means that although most people get enough to eat they do not eat the right kinds of foods. Medical and dental authorities agree that the great per cent of physical defects affecting our school children today are based upon malnutrition.

One will not be surprised at this condition when he learns that in North Carolina there are 100,000 farms without cows and 20,000 farms without vegetable gardens. This is true in spite of the fact that in North Carolina we have an ideal climate and soil for producing everything the human body needs in order to be well nourished.

However, the farm families are not to be criticized too severely. Most of the town people have forsaken their garden plots, and many of the city people do not take advantage of the tempting array of fresh vegetables offered the year round in the markets and grocery stores.

This situation has a very definite bearing on the mouth health conditions for healthy teeth and gums are dependent upon good foods. Teeth are built largely of calcium and phosphorus. Therefore, the diet should contain foods that will supply these minerals. Vitamins A, C and D are also essential for building good teeth and for keeping the gums and supporting tissues in a healthy condition.

Fortunately the simple, everyday foods will provide these elements. Milk, the most nearly perfect food, is an ex-

cellent source of calcium and vitamin A. Phosphorus is found in dairy products, eggs, meats and whole grain cereals. The citrus fruits and tomatoes are rich in vitamin C. Vegetables, especially the green leafy ones, contain these minerals and vitamins. While exposure to the sunshine is a source of vitamin D. Cod and other fish liver oils are needed in most diets to supply the vitamin D requirement. It will be seen then that a diet containing milk, fruits, vegetables, some meat, eggs, whole grain cereals and breads, and cod liver oil will help to build and maintain strong healthy teeth and gums.

Benchend

Luther Burbank, in commenting on child welfare some years ago, remarked, "If we had paid no more attention to our plants than we have to our children we would now be living in a jungle of weeds."

We are now plowing through that jungle and are heavily entangled by the undergrowth of degenerative diseases, poor digestion and lowered resistance. This was evidenced recently by the Selective Service Board's rejection of thousands of men because of impaired health. There were many

bodily ills for which these men were rejected, but the most frequent cause was bad teeth. According to reports we find that a larger per cent were rejected because of bad teeth than from any other single cause. This should be startling news and comes to us at a time of National Emergency. This condition did not happen overnight. The North Carolina State Board of Health has for years been preaching the necessity of a clean, healthy mouth and good serviceable teeth. While it appears that this preaching has fallen upon indifferent ears, it is gratifying to know that North Carolina ranks near the top, among other states, in having fewer men rejected because of dental defects.

These dental cripples were "Benchend" from service to their country. There are, in our schools and colleges today, many boys and girls who have been benched as far as their school work and other activities are concerned. The gateways of their bodies are in a state of ill health, their resistance has been lowered and their energy sapped so that they cannot meet the requirements of hard work or play. These conditions are preventing them from being good citizens and from enjoying life to the fullest.

The Work of the State School Dentists

By ERNEST A. BRANCH, D.D.S., Director

Division of Oral Hygiene, North Carolina State Board of Health
Raleigh, N. C.

THE Division of Oral Hygiene of the North Carolina State Board of Health has, in addition to its Director, a staff of thirty-two full-time dentists. Of course, these dentists are licensed to practice in North Carolina. They are also trained in childrens' dentistry and in methods of

teaching, for their work is with the children in the elementary schools of the State. They are called State School Dentists.

The Division of Oral Hygiene is primarily interested in the prevention of diseases of dental origin. Its program, therefore, is one of education, the

teaching of mouth health and its relation to general health.

The dentists go into the classrooms and teach the children. They teach them that to have good teeth they must eat the right foods. They teach them the value of brushing their teeth and the proper way to brush them. The dentists teach the children that, if their jaws are to grow normally and develop to accommodate the permanent teeth, they must give their jaws exercise by chewing hard, coarse foods. And, finally, the children are taught that in order to keep clean, healthy mouths they must visit their dentists regularly. To reinforce and follow up their teaching, the dentists have some graded educational material, prepared by the educational consultant of the Division, to leave with the teachers.

After teaching in each of the elementary grades, the dentists inspect the mouths of all of the children. This is done in the classrooms.

Each of the school dentists has with him a portable chair and other dental equipment. When he has done his classroom teaching and has made his inspections, he sets up his dental office in the school building. Here he makes the necessary dental corrections for the underprivileged children under thirteen years of age.

Now many of the readers may be feeling sorry for these children and the teachers who, they think, will have to comfort the children. This is wasted sympathy. Surprising though it may be, the children beg to be allowed to go to the school dentist. It is not necessary for the teachers to do as did the one described in the following account from one of the school dentists.

"It was necessary for me to work in the same room with the first, second and third grades. At first I thought that it would be most disconcerting, but the children were well in hand.

They behaved nicely and soon went about their reading, writing and arithmetic. The teacher was most solicitous and held the hand of each patient while the work was being done. It was not that a single child needed to have his hand held, but the teacher felt that they were her children and she must do her duty by them."

Convincing evidence that the children do not fear their visits to the offices of the school dentists is presented in the following paragraph of a letter which was written to the Director of the Division by a school principal.

"Dr. _____ is evidently a master student of child psychology for he has an exceptionally alluring appeal to children. They really anticipated a visit to him and consider it a pleasant experience. By some mysterious means he seems to weave a spell over the children which causes them to prefer him, his chair and instruments to the general routine of classroom activities."

The following letter shows that the child who wrote it certainly felt that the school dentist was his friend.

"Dear Doctor _____.

"I want to thank you for fixing my teeth. I am glad Daddy gave me a dime to get me a toothbrush. I am going to try to keep them clean. I brush them with soda and salt.

"Your friend,

JIMMY STEWART."

The school dentists do not make corrections for all of the children. Many parents are financially able to take care of the dental needs of their children. The school dentists mail cards to these parents telling them that their children need dental attention and advising them to consult their own dentists. This is a reminder that is needed and appreciated by even the most careful parents.

The school dentists follow this same procedure from grade to grade and from school to school: teaching, inspecting, making corrections for the underprivileged and referring others to their own dentists. All of the children receive the benefits of the program because it is educational.

During the year 1940-1941 the necessary dental corrections were made for 71,816 underprivileged children. The

4,212 lectures which were given by the dentists on the staff were attended by 180,883 children.

Seventy-five of the one hundred counties in North Carolina participate in this Mouth Health Education Program. Each of these participating counties bears one-half of the expense of the program in its schools, and the State Board of Health defrays the other half.

The Institute of Public Health Dentistry

By CAROLYN MERCER, Educational Consultant

Division of Oral Hygiene, North Carolina State Board of Health
Raleigh, N. C.

ON May 25, 1936, the white dentists on the staff of the Division of Oral Hygiene of the North Carolina State Board of Health registered in the Division of Public Health of the University of North Carolina for the first course in Public Health Dentistry ever to be offered. This course was instituted and supervised by Dr. Ernest A. Branch, the Director of the Division of Oral Hygiene.

Having proven by a successful program that the public school is the proper place to teach Mouth Health and that the dentist is the proper person to teach it, Dr. Branch realized that the activity could be made more effective if the dentists were trained to teach. He felt that, in addition to knowing his subject, the school dentist should know how to present it and should, above all, understand children.

At this first school of Public Health Dentistry the dentists took courses in Nutrition, Child Psychology, Methods of Teaching, Visual Education, Public Speaking and Communicable Diseases.

So beneficial did this training prove to be that a second session was held the next summer, and thus the Institute of Public Health Dentistry became established as an annual affair, under the joint sponsorship of the Extension Division of the University of North Carolina, the Division of Public Health of the University of North Carolina, and the Division of Oral Hygiene of the North Carolina State Board of Health. The sixth six-week course, which was held during the summer of 1941, was considered by the dentists on the staff to be the most valuable and successful of the Institutes.

In addition to the above-mentioned subjects, courses have been offered in Public Health Administration, Clinical Photography, Principles of Health Education, Child Hygiene, Sociology and School Health Problems. These courses were taught by members of the faculty of the University of North Carolina.

The past five sessions have been attended by public health dentists from other states. Texas, the District of Columbia and South Carolina have been represented.

Little Jack

By CAROLYN MERCER, M.A., *Educational Consultant*
Division of Oral Hygiene, North Carolina State Board of Health
Raleigh, N. C.

LITTLE JACK needs no introduction to the children of North Carolina. He is perhaps the best known and most popular boy in the State. Even though he is a puppet, he exerts a great influence over thousands of North Carolina school children. And, while he is no "sissy," his influence is a very beneficial one. In the minds of these children Little Jack is very definitely connected with the four rules of caring for their teeth.

Little Jack is the hero of the puppet show which is presented as a part of the Mouth Health Education Program of the Division of Oral Hygiene of the North Carolina State Board of Health. Coöperating with the Division of Oral Hygiene in presenting the puppet show is the Good Teeth Council for Children.

The show is given in three elementary schools each school day. This is the seventh year that the show has been touring the State. As it takes about two years to get to all of the counties in which Mouth Health Programs are conducted, the puppet show will visit some schools for the fourth time this year. The play is changed every two years, but the hero and the main characters are the same.

Of course, the purpose of the puppet show is to teach Mouth Health, and this it does very effectively. Between acts Little Jack comes out in front of the curtains and talks to the children. He asks them to write to him and to tell him the four rules for taking care of the teeth given by Dr. Carson, the

dentist in the puppet show. Jack receives hundreds of letters each week, and all of the children who write receive replies from Jack.

These letters from the children reveal that to them Little Jack is very real. They not only send him their love, they even send their pennies, which is surely a test of their affections. They also send photographs of themselves and their pets, Valentines and Christmas cards. One child sent Jack a cake of soap to which Jack took no exception.

As it is so long between his visits to each school, Jack keeps in touch with the children through his "Travelogue." This is a mimeographed sheet issued every two weeks and sent to the schools to be incorporated in their mimeographed newspapers or magazines. If the school has no such publication, copies of the "Travelogue" are sent for the classroom bulletin boards. In telling about his travels over the State, Jack combines History and Geography with Mouth Health.

Now, Little Jack is "at home" to his young friends throughout the State. "The House That Jack Built" is on the third floor of the new Oral Hygiene Building. In his house Jack has many interesting exhibits, and in his back yard he has a Mouth Health Fair with merry-go-round and Ferris wheel complete. Little Jack and his sponsors hope that the groups of children who visit the Capital City will include "The House That Jack Built" in their itineraries.

Dr. E. A. Branch: An Appreciation

By J. MARTIN FLEMING, D.D.S.

Raleigh, N. C.

DR. E. A. BRANCH was born in Lumberton, N. C., May 16, 1888.

He was educated in the public schools of his county and attended both Oak Ridge Institute and State College. In dentistry he was graduated from the Atlanta Dental College in 1913 and obtained his license that same year in Winston-Salem. He holds memberships in many organizations of the dental profession and signal honors have come to him in all of these.

He has written numerous articles on subjects pertaining to his work, and these have been widely published in dental and health magazines. He is a Fellow in the American College of Dentists, an honorary organization of national scope and influence. He was President of the North Carolina Dental Society in 1933-34 and he presided at the Wilmington meeting in 1934. These and other honors have come to him unsought, but to recount them does not give you any idea of the man himself. It only gives you his background of preparation for a life of signal service and earnest devotion to a cause.

It has been the history of the world that some one man has always been raised up to meet some emergency in life—some man who could do the job a little better than some other man. It has been so in religion, in politics, in business, in war and in every line of human endeavor. It is no exception to that general rule of life that Dr. Branch was called to be the successful head of the Department of Oral Hygiene of the State Board of Health. He is a born leader in his field. He has 32 men working under him. These men love him and will go to any extreme to carry out his every wish.

Their loyalty to him is based on a full knowledge that he will always look out for their best interests and do everything humanly possible to make their work both pleasant and successful. He asks for team work and has it to a full degree. Team work does not depend on telling the other man what to do, but it means working side by side with the other man and carrying a man's share of the load. He has always done that. Children give him their confidence on sight and he can do what he will with them, under the most trying circumstances. If one were asked to name his most outstanding characteristic he would unhesitatingly say it was "initiative."

All honor to Dr. Cooper for the fine work he did in originating the Oral Hygiene Program. The work had had a glorious beginning under his leadership and the stage was well set for Dr. Branch to assume charge.

His background well fitted Dr. Branch for the task ahead. He had done a general practice for a period of about 10 years at Norwood, North Carolina, and had gone from that work to become the children's dentist for the Raleigh and Wake County Board of Health. He came to this work in 1922 and served until 1927 when he gave this up and established an office in Raleigh, making a specialty of children's dentistry. He would have been successful had he continued in that work, but he had made an enviable record as the head of children's work in Wake County, and it was no wonder that Dr. Laughinghouse and the State Board of Health called Dr. Branch to a broader field—the state rather than a county.

From the very first his initiative carried him from one successful venture to another. He conceived the idea of supplementing the State funds from funds derived from local communities, such as civic organizations, philanthropic individuals, Parent-Teacher Associations, County Commissioners and other similar organizations. In this way he gained contact with numbers of societies all over the State.

He has spoken before many parent-teacher organizations and has lectured in almost every school and college in North Carolina, stressing always the absolute importance of mouth health, especially calling attention to the dire necessity of that work. He has the happy faculty of presenting his subject in language that can be understood by all. He knows the language of the first grade, the 12th grade, the high school, the college, the rural population and the urban as well, and he illustrates his points to each group with a homely philosophy that is both entertaining and convincing.

The school of Public Health Dentistry established at the University of North Carolina in 1935 is a child of his brain. It was the first school, so far as we know, ever established anywhere for teaching Dental Health. Leaders in Dental Health work in other states are putting similar courses in their institutions following his lead.

He has successfully banished fear of a dental office from the minds of little children by means of his now famous puppet show and "Little Jack." To further the interest of little chil-

dren he has set up in his new Oral Hygiene building, the first such building established anywhere, a little wonderland of surprises for children, containing a miniature schoolroom, a merry-go-round, a ferris wheel and exhibits of proper foods to eat. These are all electrically lighted and in motion, with dolls as pupils and passengers. It is interesting to watch the children as they view the exhibit. They stand with wide-eyed, open-mouthed astonishment and admiration as they behold it all. It will be one of the wonder places for a child to see in Raleigh. You ask what good will that do? Well, it gives you a hold on the mind of a little child that is more than worth every effort that has been put forth to establish it. The children will talk about it for hours among themselves and be in a receptive mood to listen to anything pertaining to Little Jack, his school and his playhouse.

To write about Dr. Branch it is hard to confine your remarks within any reasonable boundaries. You are writing about more than an individual; he is an institution in himself. He has done more to make the State dental health-minded than all other agencies put together, and it is no wonder that he holds the undivided devotion and coöperation of the dental profession of North Carolina, because the profession has the full knowledge and assurance that the dental health work in North Carolina is in good hands.

The profession, to a man, wishes for him a long life of continued usefulness in this his well chosen work.



1922



1942

TWENTY YEARS OF ORAL HYGIENE
ERNEST A. BRANCH

Message

By C. C. POINDEXTER, D.D.S., President
North Carolina Dental Society
Greensboro, N. C.

SINCE the inception of Public Health Dentistry in the public health work of North Carolina in 1918 by Dr. George M. Cooper who, at that time, was the Director of Medical Inspection of Schools, the North Carolina Dental Society has never failed to give the work its whole-hearted endorsement.

The Division of Oral Hygiene of the North Carolina State Board of Health has created a mouth health consciousness in the children and, through the children, in the adult population of the State by its educational program in the public schools. The children are

understanding the "reason why" a clean, healthy mouth is desirable from a health standpoint. In their health club discussions they are pointing out health facts that were little understood a generation ago. Evidences of this are the excellent essays and posters which have been brought to our attention.

Now that the Division of Oral Hygiene is housed in its new home—a building devoted exclusively to its activities—we wish to congratulate the North Carolina State Board of Health and the dental profession of North Carolina.

The Mountaineer.

Published By
THE WAYNESVILLE PRINTING CO.

Main Street
Waynesville, North Carolina
The County Seat of Haywood County

Stronger Generation

All of Haywood is proud of the 100 percent "clean teeth" record of Cruso school children.

Such a successful program warrants them adopting the title of "Bet 'Little Jack' vs Children Four Health Points

"Little Jack", a well-known figure in the schools of North Carolina, performed in Lee County last week in connection with the Dental Clinic sponsored by

Care Of Teeth Important For Health And Happiness

Health Workers Completing Wide Program In County

OXFORD, N. C.

ESDAY, SEPT. 23, 1941

E. A. Branch Rotary Speaker

of Oral Hygiene Division Talks on Proper Nutrition for Children

RURALITE, SYLVA,

Month Health Program

any underprivileged children in the county will have dental

pet Show Will P

Oral Hygiene P

ainment Will Be Shown the County Next Week

dentist Completes Work in Alleghany

(Special to The Journal) —Dr. Luther H. Ed- state dentist, who has com-

pleted his work in the

Winston-Salem Journal

MONDAY, AUGUST 11, 1941

Oral Hygiene in Schools

Dr. Ernest A. Branch, director of this division of the State Board of Health, recently called attention to the fact that out of approximately 1,000,000 children of school age in North Carolina, 850,000 have dental defects.

DENTAL WORK IN SCHOOLS ENDING

Drs. Evans And Pringle Pleased With Results Of Work Here

Dr. M. R. Evans and Dr. J. R.

THE ROANOKE RAPIDS HERALD

URSDAY, JUNE 13, 1940

STATE DENTIST IS WORKING IN LOCAL SCHOOL

Dr. Edwin Lipe Launches Dental Program In Valdese Elementary School.

DENTAL PROGRAM COMPLETED HERE

HERTFORD COUNTY HERALD, AHOSKIE

TUESDAY, OCTOBER 29, 1940.

Says No Need To Feed The School Dentist

RUTH SCHOOL HAS GOOD DENTAL WORK

DRS. UNDERWOOD AND YELTON DID GOOD JOB

Kiwanis Club Hears Talk On Dentistry

State Director Of Oral Hygiene Luncheon Speaker

School Children Enjoy Puppet Show

The Division of Oral Hygiene

STUDENTS ENJOY DENTIST'S VISIT

Negro Dentist Joins In Pitt School Work

In connection with the regular state-county dental program now being conducted in Pitt county by Dr. A. D. Underwood, it was revealed at the health department that Dr. J. H. Barnhill, colored dentist, began work yesterday in the county colored schools.

According to Dr. Ennett, the local

Collards Have Vitamins, Aid Teeth Experts Find

Lowly Vegetable Comes Into Own After Many Years

PUPPET SHOW TO TOUR 15 HARNETT SCHOOLS

Lillington, April 6.—The puppet

show which the dental division of

Doctor Stresses Need For Public Health Services

Dr. Underwood, State

Shows To Pupils

TUESDAY, JANUARY 20, 1942

THE ROBESONIAN, LUMBERTON, N. C.

Going To Dentists Has Been Making Fun For Thousands of N. C. Children

Oral Hygiene Division Now In New Building Own — Dr. E. A. Branch, Native of Lumberton, founder of First School of Public Health

istry.

By FRED J. COHN
In Raleigh News and Observer

An unhealthy or

Going to the dentist has been

made fun for thousands of North

Carolina school children. Can

Underwood assert all things to good health

figures to show how

a child's being pleased

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The

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

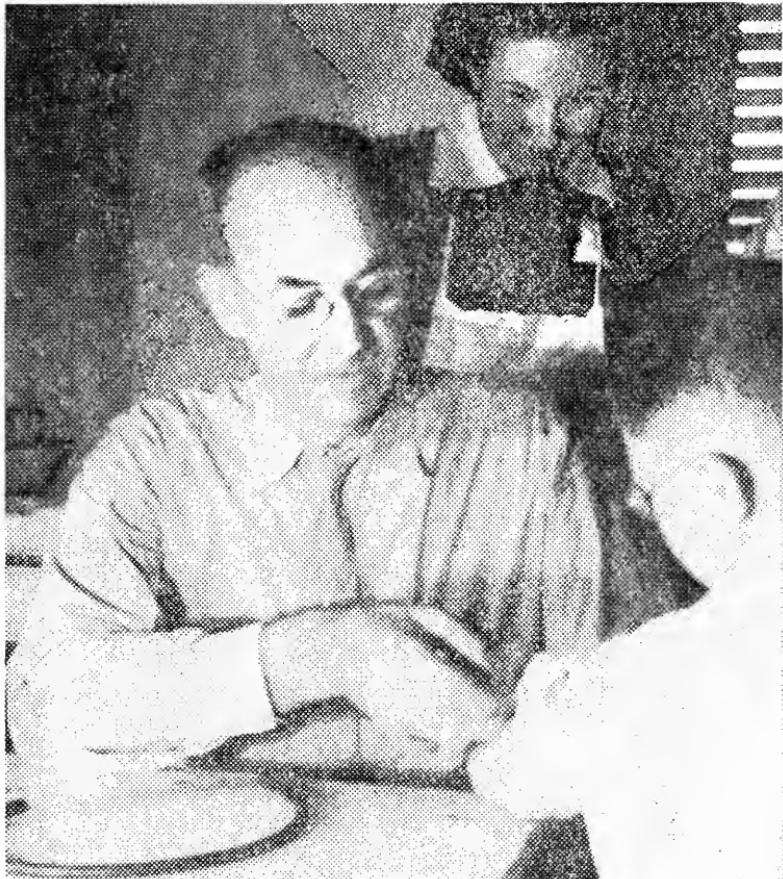
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C. C. HUDSON, M.D. — 1882-1942

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months. 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
The Expectant Mother	Instruction for North Carolina Midwives
Breast Feeding	
Infant Care. The Prevention of Infantile Diarrhea	
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APRIL, 1942

No. 4

CARL V. REYNOLDS, M.D., *State Health Officer*

JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By THE ACTING EDITOR

DR. HUDSON

ON February 17, 1942, North Carolina lost

one of its outstanding health officers, for on that day Dr. C. C. Hudson died. His was a long, distinguished and honorable career as a health worker. He was born at Berea, Kentucky, November 23, 1882; graduated from Berea College in 1905; earned the degree of doctor of medicine from the Medical College of Virginia in 1910.

Dr. Hudson secured his first public health experience with the medical inspection of school children for the Richmond, Virginia, Health Department, 1910-1913. He then became health officer of Danville, Virginia, going from there to Charlotte, North Carolina, as City Health Officer. During the first World War he served as assistant surgeon at Camp Green. In 1920 he returned to Richmond—then in 1923 he became City Health Officer at Greensboro, North Carolina.

With good fundamental training and a wealth of experience for his background, Dr. Hudson at once began to build a modern city health department. With a continuity of purpose rarely equalled, he struggled to protect the people of his community. He had his share of discouragement and disapp-

ointment but he kept his eyes focused on progress and improvement. Hard work and sustained effort were characteristic of the man. He worked with his hands as well as with his head—yet he always found time to study. He was the studious type of health officer. New knowledge had a definite attraction for him but the old was not discarded just because it was old. Of him it can truthfully be said that he was "not the first to try the new nor the last to cast the old aside."

Dr. Hudson's policies were carefully planned, after much thoughtful consideration had been devoted to their formation. After a plan had been used it was subject to critical evaluation. If defects were detected, the plan was corrected or a better one devised. To him adherence to error was unthinkable.

Dr. Hudson was not cold nor austere. He was the kind, sympathetic, warm-hearted type of man. Loyalty was an integral part of him. He had a sympathetic understanding of the frailties of mankind. Some of his duties brought him in contact with a wide variety of transgressors of moral and legal codes. He did not deal with these people as sinners, but as unfortunate people who needed help. He "ministered unto the least of these."

It was impossible to think of Curt Hudson as a friend without a deep stirring of the emotions. He was all that any one has a right to expect of a friend. He was a stimulant to the intellect. He was kind when kindness was needed. When criticism was needed he had the courage to criticize. He was the frank friend who tells you when you are wrong but who will not desert you just because you seem to be in the wrong. No fair-weather friend was he. The intellectual honesty of the man made him much sought after as an adviser. Health workers liked to talk over their plans with him. His influence in this field extended far from Greensboro. The variety of people who sought his kind and competent advice was as diverse as the subjects they presented. He was a friendly friend.

Away from Greensboro Dr. Hudson's conduct was always above reproach. He did not proselyte religion. At home he lived as an active churchman. The faults he may have had were covered so deeply by his good deeds that in the memory of those who really knew him they cannot be remembered. No citation or medal of honor should outrank the title which C. C. Hudson richly deserves—that of a Christian Gentleman.

* * *

NUTRITION Nutrition is one of the major subjects in the present program of the State Board of Health.

In this field North Carolina occupies a prominent position among the states of the union. One of the reasons for this is the fact that North Carolina has a health officer in Dr. Carl V. Reynolds, who believes in looking at problems with his eyes open and determining their relative importance. He is then resolved to do something about them. We have a nutrition problem in North

Carolina. Dr. Reynolds saw it and knew that it was serious. He met the situation courageously and with determination began to solicit financial aid from out-of-State sources to assist those agencies in the State which could help in studying the problems. A research group was set up under Dr. D. F. Milam of the Rockefeller Foundation.

Dr. Milam is well and favorably known in North Carolina. His keen intellect has been used before in solving our difficult problems. He is a thoroughgoing student, a real scientist. He has demonstrated that he is capable of sustained effort. In this issue of the BULLETIN Dr. Milam outlines the plan his study is to follow. Future issues of the BULLETIN will carry the outlines of other activities in the field of nutrition.

What we are doing in North Carolina is just a part of a nationwide effort to have a better-nourished and a healthier and a stronger people. In the making of this nationwide program Dr. Reynolds sat high in the council of the country. Favorable publicity soon created such enthusiasm among the public that vitamins were soon topics of conversation wherever people came together. As always there were selfish commercial interests who jumped at the chance of cashing in on the enthusiasm and gullibility of the public. Vitamins in concentrated form were offered with claims as fantastic as, "They will shine your shoes and curl your hair and make you feel like a millionaire." The price charged for these widely advertised, so-called super deluxe products were equally fantastic.

The *Journal of the American Medical Association* stormed at these wolves in sheep's clothing in an article entitled, "Vitamins Rampant." "Vitamins are merely important food constituents that have been isolated, concentrated or synthesized. Restricted diets may lack some

of these vitamins, and that lack expresses itself in a variety of symptoms. But relief of fatigue and the jitters or the creation of health and beauty will not come from vitamin capsules unless the symptoms have appeared or the beauty has been lost as a result of a specific deficiency. If daily consumption of a good serving of ham, a green vegetable, a glass of milk, a slice of brown bread, an orange and the other constituents of a suitable diet will not maintain the body in a satisfactory state of nutrition, a medical study is needed more than a shot with a shotgun pill of vitamins. A given amount of vitamins, like oil in the crank case of a car, is necessary to insure proper functioning; but the efficiency of the parts is not increased by adding unlimited amounts."

The New York *Times* had this editorial comment to make:

"Once upon a time we counted our calories. Now we worry about our vitamins. We buy about fifty millions' worth a year in the form of tablets, capsules, liquids, yeast and liver preparations. Now comes the news from the WPB that we must curtail our consumption of vitamin A, which happens to be the one that prevents night-blindness and some other defects of vision.

"No hardship is involved in this order. All the vitamins we need are contained in balanced rations. We have only to eat the required amounts of butter, eggs, milk, fruits, vegetables and liver to meet all requirements. The passion for vitamins probably needs curbing. Indeed the nutrition experts have reached the conclusion that we are not likely to do justice to ourselves by swallowing sunshine in the form of drops and relying on extracts and synthetics for our vitamins."

Dr. Reynolds felt that he should tell our people the plain simple facts which he has presented in an article published in this issue of the BULLETIN.

BIRTH CERTIFICATES In a program covering so wide a field with so many divergent activities as are conducted by the State Board of Health it is important that there be no confusion nor misunderstanding. With the coming of the second World War there has been an overwhelming demand for birth certificates that citizenship may be proved most acceptable. To clarify and define the procedure Dr. Reynolds has issued a statement found on page eight of this issue of the BULLETIN.

* * *

WORRY In the May, 1941, issue of the BULLETIN there was a review on a highly praised booklet on "Worry and Its Cure," by the Rev. P. D. Woodall, a retired minister of Louisburg, North Carolina. It is a pleasure to note that the first edition of this booklet has been sold out and that a new, completely revised second edition is now available. It should do much good. It is listed in the Book Department of this BULLETIN.

* * *

NEGRO HEALTH WEEK Each spring for many years we have had a week set aside as Negro Health Week.

While we realize that each of the 52 weeks of the year should be health week we have shown appreciation of the special attention which the Negro citizens of the State give to health. They have done much to promote health education. Long-term planning has been emphasized as contrasted with spasmodic effort. Their progress during the past twenty years is little short of phenomenal. Increased hospital facilities, better training courses for nurses and teachers, postgraduate training of physicians, and an increased number of Negro health workers may be listed as definite accomplishments. Three papers in this issue give definite evidence of this forward march.

Program of Division of Nutrition

By D. F. MILAM, M.D., Director
North Carolina State Board of Health
Raleigh, N. C.

THE Division of Nutrition of the North Carolina State Board of Health is composed of the following:

1. Administrative and Field Personnel

Medical Director—Dr. D. F. Milam
Assistant Physician, temporary part-time substitute—Dr. A. H. Pate.

Nutritionist—Miss Alla Meredith
Secretary—Mrs. G. O. Boucher.

2. Laboratory Personnel

1. At Raleigh Laboratory (now being organized)

Biochemist—Dr. Bailey Webb
Technician—Miss Mary K. East.

2. At Duke Hospital Laboratory

Biochemist—Dr. J. R. Klein
(part-time)

Chemist—Mrs. Erle Ayres

Techuician—Winston Crabtree.

Technician (NYA work)—Miss Rachel Lewis.

The Division of Nutrition functions under the general direction of the State Health Officer. Its activities include the appraisal of human nutritional deficiencies, clinical and subclinical; among population groups; the instituting of programs for the prevention and correction of dietary deficiencies; and in-service training of public health personnel in the field of nutrition. At present the program includes surveys of a sufficient number of families to give an index of the nutrition status of representative communities of the county being studied; and secondly, aiding the county health personnel in mastering the techniques essential to supplying improved nutrition services to the people.

Up to the present time the Division has been housed in Duke University Medical School. It conducted a preliminary but thorough nutrition survey of a population group of 225 persons in Chatham County. At present a similar survey is being carried out in a district of Wayne County. This survey consists of an appraisal of the nutrition status of each individual and of the family to which he belongs. It includes (1) a clinical examination of each person by the physicians, (2) a dietetic study of the family by the nutritionist—a seven-day food consumption record of each individual—and data on occupation, income, food production, housing, etc., and (3) a laboratory examination of samples of blood.

During the period of a nutrition survey in a county the Nutrition Division field staff serves on the staff of the county health department and under the general supervision of the county health officer. It is hoped that the counties surveyed and other counties will add nutritional personnel to the regular staff on a permanent basis.

In addition to making county nutrition surveys, the field staff of the Division of Nutrition will serve as far as practicable as nutrition consultants to health, medical, and other agencies desiring such assistance. When a nutrition survey has been completed in one county, the field staff will move to another county to start another survey. The Consultative Service of the Nutrition Division, it is hoped, will be utilized over the State as is the specialized personnel of other divisions of the State Health Department.

The Nutrition Division coöperates closely with the State Nutrition Council, a subcommittee of the State Civilian Defense Committee. The State Council contemplates organizing county nutrition councils which will serve as planning and as coördinating agencies.

It is expected that several county agencies, such as those interested in agriculture, education, and welfare, will each have or develop its own nutrition program and would feel free to invite collaboration on the part of the Health Department nutritionists and other qualified persons. The county health department should have a full-time nutritionist on its staff and its nutrition activities should be of a high order. Intensification of the work of the health department in nutrition might lead other county agencies to seek its consultant assistance in strengthening their programs.

Demonstration County. It is hoped that in one or more counties all the agencies interested in nutrition can co-operatively set up a program for the intensification of nutrition work to the end that an outstanding demonstration of what can be done in nutrition improvement may be developed. Such a demonstration would no doubt prove to be stimulating to other counties. It has been hoped that Wayne County might prove to be the area in which the first demonstration would develop. The Nutrition Division is already making a nutrition survey. It was started in the Rosewood School District and will include approximately 125 families in this area. It is expected the survey will include families in other sections of the county in numbers sufficient to present a fair picture of the county's status relative to nutrition.

The Vitamin Problem

By CARL V. REYNOLDS, M.D.

State Health Officer

Raleigh, N. C.

WIDESPREAD publicity has been given the fact that the Federal Government has found it necessary to curtail, to some extent, the preparation and sale of certain vitamins. This need cause no undue alarm.

One need only to know a few elementary facts about nutrition to realize that, in this country, the average person can have all the essential vitamins by following a few simple guides. Fresh foods and those that have been properly preserved by methods that are now well known contain all the natural vitamins necessary for a well-balanced metabolism. Information as to these methods can be furnished by the Extension Department of the North Carolina

State College at Raleigh, which is doing a splendid work along this line.

Diagnosis of vitamin deficiencies should, of course, be made by competent physicians. Where these deficiencies are serious, it may be necessary to supplement the natural vitamins with processed ones. In such event, your family physician will properly advise you.

It is not my purpose to enter into a lengthy discussion of this subject. For the public's information, here is a list of the most essential vitamins, with a notation as to some of the symptoms resulting from an inadequate intake of each, together with good sources of supply:

VITAMIN A—Deficiency causes night blindness; rough, dry skin; low body resistance. Good sources: Green leafy and yellow vegetables; all dairy products; liver; dried apricots; prunes; fish oils.

VITAMIN B₁—Deficiency causes lack of appetite; general weakness; weak heart; loss of weight. Good sources: Whole wheat and enriched bread; cereals; oranges, bananas, and other fruits; milk; liver; pork; peas and beans.

So necessary is Vitamin B₁, and so devitalized has become our highly milled and bleached flour, that its nutritional value has been reduced to about 40 percent. Such emphasis has been placed on the importance of enriched flour and bread that producers of Vitamin B₁ have agreed to make it available to flour manufacturers, at a cost so infinitesimal that it need not affect the price the consumer pays, if popular demand is sufficient. It is, therefore, up to the public, and the public should demand enriched bread and flour, for health's sake. Enriched flour is white or near-white flour which has in it specified amounts of at least two vitamins, B₁ and nicotinic acid, and one mineral, iron.

When, oh when, will the public stop paying excessive prices for processed vitamins, when it can secure all the essential vitamins in their natural form by eating the right kind of foods?

VITAMIN C—Deficiency causes pyorrhea; gum infections; dental cavities; scurvy; anemia. Good sources: Fruits, especially citrus; tomatoes, and most other vegetables.

VITAMIN D—Deficiency causes impaired formation and maintenance of teeth; bow legs; rickets. Good sources: Fish liver oils; Vitamin D milk; butter and enriched margarine; eggs; fish; sunshine.

VITAMIN G—Deficiency causes sores in angles of mouth; burning eyelids; mild, greasy dandruff. Good sources: Wheat germ and yeast; milk; cheese; liver; yellow, red and green vegetables; some fruits, especially dried apricots and prunes.

NICOTINIC ACID—Deficiency causes pellagra; indigestion; diarrhea; insomnia; depression. Good sources: Wheat germ; liver; cheese; red, yellow and green vegetables; dried apricots; prunes; eggs; lean beef; brewers' yeast; rice pudding.

This whole matter may be summed up in the slogan coined by the eminent nutritionist, Dr. E. V. McCollum, who said: "Eat what you want, after you have eaten what you should." In other words, eat every day the necessary amounts of protective foods; and, after that, eat whatever your appetite calls for.

What, then, should each person eat every day to insure a well-balanced diet?

The answer is, a generous helping of at least one of the foods listed in each of the following groups:

1. Whole-grain cereal.
2. Milk and milk products.
3. Meat, eggs and fish.
4. Vegetables.
5. Fruits.

BIRTH CERTIFICATES

Dr. Carl V. Reynolds, State Health Officer, has issued the following statement with respect to delayed birth certificates:

"In view of the emergency, the rush for certified delayed birth certificates now is unprecedented.

"The North Carolina law, as amended in 1941, provides that an application for a delayed birth certificate be made to the register of deeds of the county in

which the applicant was born, and not to the State Board of Health. If all applicants would bear this in mind, it would save much time now devoted to unnecessary correspondence and would insure quicker service.

"A delayed certificate is the record of one who was born prior to October, 1913. Please bear this date in mind. If the applicant needs instruction as to what proof is necessary, the register of deeds, in each instance, will supply it.

If the applicant knows what proof is necessary and furnishes it, the register of deeds will see the matter through.

"The only fees necessary are those prescribed by law to be paid registers of deeds for recording births and furnishing certified copies of certificates.

"Only those persons born after October, 1913, should apply to the State Board of Health at Raleigh—all others to registers of deeds, as pointed out above."

The Need for Improving Health Programs In Negro Colleges In North Carolina

By WALTER J. HUGHES, M.D.

School Health Coördinating Service
Raleigh, N. C.

A DISCUSSION of needs is always complicated, because needs imply existing conditions that should be remedied. Therefore, the needs must first be ascertained. In order that one may know that needs exist there must be an interpretation and an appraisal of the various social, moral, and physical forces that affect college life. Broadly speaking, this is a three-fold problem involving the student, the college, and the community. For these three are interrelated, each proceeding into an active correlation with the other, each supplementing the other and each complementing the other. A college health program, to be effective, must be constructed so as to reach communities. Communities do not come to college, but students from communities do.

Any standard college textbook on health education will give the provisions for what constitutes an adequate college health program. These are listed as:

1. Healthful living conditions.
2. Effective health service.
3. Health instruction.

The implication is that one has reached the standards once his program complies with the basic requirements. But is it as simple as this? The answer is no, for these books were written by different men, for different people, many of them living under different environmental conditions.

By way of illustration may I cite the following incident: The story is told of a teacher working a short distance from Baton Rouge, Louisiana, who was having a lesson on birds read from one of the standard textbooks accepted by that state.

To drive home a point from the lesson the teacher asked the boy this question, "When do the robins come?" The pupil answered promptly, "In the fall." "Now, Jimmie," urged the teacher, "Read the lesson carefully again."

After the second reading she said cheerfully, "Now, Jimmie, when do the robins come?" More hesitantly and sullenly he answered again. The robins come in the fall." "Jimmie, Jimmie," shouted the teacher, "read that lesson again; now tell me when the robins come." Almost in tears the boy finally answered, "The robins come in the spring." And so they do—in Boston where the textbook was written. But in Louisiana, just in order to avoid the Northern winter, they come in the fall.

Our health problems are not so simple as the phrases healthful school living, health service, and health instruction would imply. They cannot be expressed as isolated functions; they ramify over all the roads of social and economic relations. Ninety percent of the students who enter college have

either behind them or in front of them an economic problem, which in the end may become a problem of public health. If the problem is behind the student it is one of parents, sisters or brothers (a college community problem.) The pressure of living strikes all classes; the only difference is in degree. If the problem is in front of the student, it is a student problem which means mental anxiety, probably deprivation of food, sleep, and other necessities and essentials of life.

In order that some type of appraisal of the health programs in colleges might be made, two conferences were held and a personal survey was made. The first conference was held in the new State Building at Raleigh on November 16, 1939. The membership of the conference was composed of the administrative officers of the respective



PHYSICIANS AND NURSES DEMONSTRATING EXAMINATION OF SCHOOL CHILDREN

colleges, the directors of the departments of physical and health education, deans of the colleges, and the college physicians. The officials of the State Department of Public Instruction and staff members of the School Health Coordinating Service were also in attendance. The purpose of this meeting was to discuss the health education program of our colleges.

The second of these conferences was held in July, 1940, at the North Carolina College for Negroes. This conference was composed of the college physicians and a few physical and health education instructors. It is significant that the conclusions of both conferences were the same, although the two groups represented people from various fields of study.

The conclusions were as follows:

1. That the general education program as practiced in the colleges at the present time fails to give due emphasis to the importance of health services and health instruction, although this is regarded by these institutions as one of their cardinal educational objectives.
2. That the health services given in these institutions is neither adequate nor sufficiently conducive to healthful living.
3. That the health education now being conducted in these colleges is entirely inadequate for present-day needs.

More recently, Miss Jennie Douglass, staff member of the School Health Coordinating Service, made a personal study of these institutions and the findings revealed the following:

In several of the colleges there are a few conditions which are not conducive to healthful living, but on the whole she found the living conditions in these colleges to be excellent. There is some overcrowding of dormitories, three have very poor dining room facilities, three have excellent facilities and three others

are just fair. With the exception of two schools the lavatory and toilet facilities are adequate.

Many of the schools have excellent recreational programs outlined and in several cases they are well executed. The problems presented are lack of sufficient trained personnel, sometimes equipment and, all too often, a basic philosophy to guide the recreational program.

It is worthy of note, however, that in neither conference or survey have the environmental conditions appeared abnormal. There is, however, room for improvement. It must be concluded that the living conditions of the majority of the colleges are equal to the environmental conditions which are found in the student's own home, and in many instances they are superior. Out of the unprecedented interest to provide the student with a more abundant life has emerged the stimulation for the provision of modern plants, the extension of educational, cultural and recreational advantages.

The development of good housing is certainly an essential step in the development of strong, healthy bodies, and in a large measure contributes to the conquest of disease. A well-trained faculty is another essential to the training of students and the standardization of colleges. In the development of modern housing facilities, physical equipment, and trained personnel, the colleges have attained heights that neither the power of imagination could have depicted nor the vision of the prophet foretold. But lest we forget, let us remember that the whole individual goes to college—his soul, his mind, and his body.

If there is one place in Negro life where ignorance and poverty do not influence health service, it is the Negro college. In one of the colleges that could certainly afford it, there is no tubercu-

losis skin testing, in another of equal importance, the test is given only when "indicated." The latter statement does not conform to the present-day medical opinion, for it is the accepted theory that the skin test is the indicator and the X-ray the "diagnosticator." Yet, one of the poorest colleges carries on this particular health service 100 percent and follows the reaction through to the X-ray, and if needed, the sanitorium. One or two colleges are doing excellent work, but organization and improvement are indicated everywhere. The importance of an effective health service program is not only an imperative need, but a necessity.

A college is an organized group, hence the importance of the application of public health procedures for the prevention of disease, prolonging life, and promoting physical and mental efficiency.

In order to determine the obligations of a college in relation to the organization of health service for the protection of the health of the individual and the college population as a whole, it is essential that we set forth the desirable minimum needs.

The health service should be organized, the personnel should consist of the following: physician, dentist, nurse, health and physical educator and secretary. The physician and nurse should serve on a full-time basis. The department of health education should be directed by a well-trained physician with public health training. As far back as 1859 the president of Harvard University, in his annual report to the overseers, makes this statement: "The service of a skilled and experienced physician who shall act as a friend and adviser of the students is greatly needed, whose advice they should have the right to ask confidentially on all matters relating to health, and who should exercise a controlling direction whenever a student appeared to suffer

from bad habits, ignorance, and neglect, would be the best possible safeguard. Amherst College has already supplied this urgent want. They have set a good example and it is earnestly hoped that the friends of Harvard will see to it that the students enjoy like security." The function of the college physician today probably begins with the physical examination of the student, attending the sick and treating the injured. But our health problem goes further than that. There are individual maladjustments, the mentally sick, teacher and pupils' classroom relations, sex problems, and various other problems of mental hygiene that need the guidance of a physician.

The health service should be organized on a uniform basis in all the colleges. The present medical fee is inadequate. At present the lowest fee is \$1 and the highest \$3.50 per annum. The minimum fee should be \$5 to \$10 per annum. Since a college is responsible for health service to all students, a similar fee should apply to those attending summer sessions as well.

The college should concern itself with a good physical examination not only of students, but of the entire college population. The examination should be thorough and should include laboratory tests, such as urinalyses, tuberculin tests, X-rays of positive reactors, and annual dental examinations. The results of these findings should be recorded on uniform records. These records should be accessible only to the physician and nurse.

If the financial resources are such that a college cannot employ a full-time physician, provisions should be made for consultation services. There should be a waiting room, an examining room, and a laboratory. The physician in the average small college should spend at least two hours daily on consultation, conference, and follow-up work. The college should provide an

infirmary with about two beds for each 100 students. For the more serious cases it should have affiliation with a general hospital. All medicine should be provided without extra charge.

Every college should have one or more full-time nurses who should be college graduates. Their professional training should be acquired at a recognized hospital; and it is desirable that they have some training and experience in public health work. They should possess radiant personalities and upright characters, steadfast and unmovable by present-day fads. Nurses should be selected because of their superior qualifications; they should be given teaching responsibilities, and the principal nurse, at least, should be given the status of a faculty member.

Practically all the colleges report that they are giving some type of instruction in health. Although there is ample material in the various textbooks taught in our colleges for the integration of health instruction, it appears that these sources are not being utilized advantageously in giving the students the right attitude in the formation of basic health practices. Moreover, the health instruction is not designed so that the student can use the knowledge for the benefit of community health and proper health teaching in the public schools. The white house conference on child health and protection consulted 48 school physicians in 25 states with regard to desirable legal requirements in this field, and 45 were of the opinion that the training of teachers for the detection of signs of communicable diseases and of gross physical defects should be included. One of the physicians remarked that ability of the teacher in this field is the keystone of medical inspection for the appearance of defects and disease neither awaits the advent of the school medical officer nor the visit of the school nurse.

Every individual who has graduated from our teacher training schools and is teaching today is working under a potential court sentence, and every president of these schools is *particeps criminis* for the Public Health Law of North Carolina, Article 43, Section 5. 780, states: "It shall be the duty of every teacher in the public schools to make a physical examination of every child attending the school and enter on cards and official forms furnished by the State Board of Health a record of such examination and if any teacher fails within sixty days after receiving the aforesaid forms and requests for examination and report to make such examination and reports as herein provided, the teacher shall be guilty of a misdemeanor and subject to a fine of not less than ten dollars nor more than fifty dollars or thirty days in prison."

No health or physical educator alone can conceive of an adequate health instruction program that will equip the student to meet school and community health needs. Hence the importance of the inclusion of a physician and nurses as participants in the health program in our colleges.

Finally, all public health problems are concerned with two phases, morbidity and mortality. The prevention of morbidity will consequently mean the reduction of mortality. It is, therefore, the duty of public health to utilize all the constructive forces of society in the realization of these objectives.

Necessity can set me helpless on my back, but she cannot keep me there, nor can four walls limit my vision.

—MICHAEL FAIRLESS.

A man should never be ashamed to say he has been in the wrong, which is but saying he is wiser today than he was yesterday.—POPE.

Some Observations of Health Education Work Among Negro Teachers In North Carolina

By JENNIE LOUISE DOUGLASS, M.A.

Health Education Adviser, School Health Coördinating Service
Raleigh, N. C.

IN November of 1939, there was a meeting in Raleigh attended by representatives of the State Department of Public Instruction, State Board of Health, the School Health Coördinating Service, and various Negro colleges in North Carolina. The purpose of the meeting was stated by Dr. John F. Kendrick of the Rockefeller Foundation as follows: "To consider the advisability of a coördinated program of health education in the schools of the State in order that teachers may be able to discover health problems of school children, refer these problems to the proper health authorities, and try to develop in school children proper health habits." During the course of the meeting, attention was called to the fact that many in-service teachers had received very little training in health guidance of children. It was further brought out that the Negro colleges of the State were doing far too little to fit the prospective teacher for this work.

Later that year, the writer studied at one of the Mid-Western universities. In order that she might obtain a general knowledge relative to the training of prospective Negro teachers for health work, she chose the following subject for her master's thesis: "The Status of Hygiene Teaching in Teachers Colleges for Negroes." A general statement from these findings was that the majority were doing little, if anything at all, toward preparing the prospective teacher to take part in a school health program. The investigator hoped

through this study to awaken sufficient interest in many of the colleges for them to make at least a start in that direction. It has been pleasing to note that many of the colleges studied have since taken steps to improve their health education courses and student health services.

It is a well-established fact that the teacher, if trained, can be of invaluable aid in the promotion of school and community health. Such training is needed by the teacher for her own individual benefit, making for better health and greater teaching effectiveness.

The Negro teacher especially needs training along this line because of the health status of the race. Ira DeA. Reid, in his sociological treatise, makes the following statement:

"The mere facts of physical life and death create some of Negro youth's more serious problems. Their education, economic efficiency, and vitality are affected. The racial population which embraces Negro youth has a higher birth-rate, a higher sickness rate, and a higher death rate than is found among the whole population in the United States."

Through the School Health Coördinating Service, extension courses have been held in certain counties for the in-service Negro teacher. In this 24-hour course, teachers have been taught to keep the State health record card, to screen out children by learning to do both a general inspection and a morning inspection, to weigh and meas-

ure children, to test vision, to detect deviations from the normal in children, and to utilize effectively medical and dental services. They have been given some principles of nutrition and physical activity in relationship to the proper growth and development of the child. Some time has also been devoted to community health problems and community organization.

Many of them have not only learned how best to utilize local and State agencies in their follow-up program of physical defects among school children, but they have used their own ingenuity in the matter. For example, the Negro schools of Goldsboro planned a program for the correction of physical defects among school children. Through its local teacher unit, a drive was sponsored to raise funds to be used in this effort. A splendid response was obtained from individuals and organized groups within the community. The fund was shared by all children in the four Negro schools of the city. The Wayne County Health and Welfare departments coöperated in the enterprise. The welfare department made the necessary family investigations and was instrumental in getting specialists at a reduced cost. As a result during the year, 15 children were fitted with glasses, four had tonsillectomies, two were sent to the orthopedic hospital in Gastonia, one boy entered the school for the blind in Raleigh, and one girl had an operation to correct crossed eyes. All children with a positive reaction to the tuberculin skin test were X-rayed.

Other corrections were influenced through visits to the parents from the public health nurse and teacher. All of these schools are equipped with lunchrooms and the nutritional status of the children is being improved either by free lunches or plate lunches costing three cents and a glass of milk for two cents. Surplus commodities, gifts of food from organizations and parents,

and the money received from lunches make possible these low-cost and free lunches.

Each one of these schools has a well-equipped health room. For the first time, last spring this system held a May Day exercise with all children in the elementary grades participating. Many of the teachers in these Goldsboro schools are doing an excellent job of health teaching and guidance. They are sponsoring health projects in their classrooms and they try not to lose an opportunity to integrate health with their total program.

There are numerous instances that could be cited of county teachers participating in this program. Through their efforts, many health hazards have been eliminated, free lunchrooms established, defects corrected, and health taught.

The work accomplished by the teachers who attended the child health conferences at Durham has been encouraging. In a class in Methods and Materials of Health Education conducted by the writer, many worthwhile things were accomplished. Each teacher attempted to develop for herself a workable philosophy of health education, one that would help in meeting the needs of her own school and community.

A collection of devices for use in morning inspection made by the group has proved most useful to teachers during this school term. Several contributions from groups working on joint activities were:

1. A bibliography of free and inexpensive materials for health teaching.
2. A suggested program of health education in national defense for the elementary school.
3. A compilation of opportunities for health teaching the year around.
4. A program to create proper attitudes in parents toward health education.

Of the many methods studied, the problem solving approach was stressed more than any of the others. This way of teaching offers excellent opportunities for developing in the pupils desirable character traits and at the same time renders effective service.

During the 1941 child health conference at Durham, some 25 persons worked on individual problems relating to their own teaching situation and at the same time learned the technique of group participation in problem solving. Several creditable pieces of work grew out of this. Miss H. Nora Evans, Jeanes Supervisor of Wake County, selected for her problem, "Some Aspects of Healthful Living in the Small Rural Schools of Wake County." Included in this study is a survey sheet for the purpose of finding the needs and problems of children. A portion of the study is devoted to improvements in two schools, these improvements having been made by the Parent-Teacher Association and the students. In comparison to this is a small school and community with many undesirable features which, through health projects and activities sponsored by the school, could be remedied. An account is given of the project sponsored by the Parent-Teacher Association which added a room to a two-room school and installed a lunchroom so that the children could have a hot meal at school.

A unit of work on "Healthful Living Through Activities" was done by Miss M. Freeman of Halifax County. Another teaching unit on "Home Hygiene and Care of the Sick" was beautifully carried out by Mrs. I. Jamierson. This was a complete teaching unit for her school term at Eastman, bringing in the most needed things in that community.

In connection with this was a model rural home improvement project. The miniature house was made of logs and cement, with screened windows and

doors. It was surrounded by a white picket fence, a beautiful lawn and a well-arranged walk. In the back was an open well which had been abandoned and supplanted by a properly protected pump. The privy was placed at the lower end of the yard, so that there would be no drainage into the water supply. Inside the house was a room demonstrating the set-up for the care of a sick person.

These are only a few of the worthwhile things accomplished. Reports from teachers and visits to classrooms show that use is being made of the work planned during the summer.

The Wilson City Schools employ a full-time person as supervisor of physical education and health education. Miss Delores Hines, who fills this position, is doing a splendid job and much progress has been made through her efforts. Much could be said of work in other areas but space will not permit. The preparation of the pre-service teacher for school health work still needs attention. It is gratifying, however, to note that some few colleges in the State, during this school year, have taken definite steps in that direction.

The greatest of faults, I should say, is to be conscious of none.—THOMAS CARLYLE.

"No man is an Iland, intire of it selfe; every man is a peece of the Continent, a part of the maine; if a Clod bee washed away by the Sea, Europe is the lesse, as well as if a Promontorie were, as well as if a Mannor of thy friends or of thine owne were; any mans death diminishes me, because I am involved in Mankinde; And therefore never send to know for whom the bell tolls; It tolls for thee."

—JOHN DONNE.



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MAY, 1942

No. 5



GEORGE ROBERT WARD
1877 — 1942
Public Health Statesman

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Adenoids and Tonsils	German Measles	Sanitary Privies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care
Prenatal Letters (series of nine monthly letters)
The Expectant Mother
Breast Feeding
Infant Care, The Prevention of Infantile Diarrhea
Table of Heights and Weights

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months. 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instruction for North Carolina Midwives

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

A PROCLAMATION

By THE PRESIDENT OF THE UNITED STATES OF AMERICA

WHEREAS, the Congress by joint resolution of May 18, 1928 (45 Stat. 617), has authorized and requested the President of the United States to issue annually a proclamation setting apart May 1 as *Child Health Day*:

Now, THEREFORE, I, Franklin D. Roosevelt, President of the United States of America, in recognition of the vital importance of the health of children to the strength of the Nation, do hereby designate the first day of May of this year as *Child Health Day*. And I call upon the people in each of our communities to contribute to the conservation of child health and the reduction of illness among children by making every effort to the end that before May Day-*Child Health Day*, children over nine months of age be immunized against diphtheria and smallpox, the two diseases for which we have the surest means of prevention.

IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States of America to be affixed.

Signed:

FRANKLIN D. ROOSEVELT.

Notes and Comment

By THE ACTING EDITOR

SENATOR WARD **T**RADITIONALLY we dedicate each year the May issue of the BUL-

LETIN to the purpose of improving child health. The importance of a concerted effort for the protection of the younger

portion of our population is shown by the foregoing proclamation of our President.

In the promotion of child health George R. Ward rendered high service. He, perhaps more than any other per-

son, deserves credit for the enactment of our county health law, providing for State aid to county health departments. Realizing that the county is the logical unit for local health work, Mr. Ward knew that infectious diseases recognized no county boundary. He also knew that numerous counties could not afford to operate an effective health department. He, therefore, subscribed to the idea that the State should give financial aid to county health work. As chairman of the House Finance Committee of the General Assembly of 1917 he played a most important part in passing a law which time has proved to be good and which many other states have imitated. By this service as a statesman, Mr. Ward should be credited with the saving of thousands of lives. County health work in North Carolina has spread to 81 counties and their health departments have developed and improved with the aid and guidance of State and Federal governments.

It would seem proper that THE HEALTH BULLETIN should speak for itself and the health workers of the State of the gratitude which we owe to him.

George Robert Ward was born eight miles west of Wallace on November 4, 1877. He received his early education in both the public and private schools of eastern North Carolina. He was graduated from the University of North Carolina in 1903, receiving the degree of Bachelor of Philosophy. Entering the legal profession in 1904, he practiced law successfully in Duplin County until the end of his life. As a leader in legal, fraternal, religious and political life, he commanded the respect and admiration of his own community and of the State. The humble as well as the powerful revered him.

As a lifelong friend, Dr. G. M. Cooper pays tribute to him in this issue of the BULLETIN.

DR. SHAW The BULLETIN has a rule that it will accept for publication no paper which has appeared in other publications. This is a good rule but like all good rules there should be exceptions to it. Dr. Shaw's paper published in the *North Carolina Medical Journal* was so timely that we thought that it should be within the range of vision of each of our readers. We, therefore, requested and received permission to reprint it. When we realize that Dr. Shaw wrote this paper more than one year ago our admiration for him as a farsighted and thoughtful physician is enhanced. We request that each parent read and reread "How Can I Prepare My Child for the Future?"

* * * *

HEALTH SUPPLEMENTS Twenty-five years, a quarter of a century, is a long time for one man to be a city health officer. North Carolina has only one man who has that distinction, Dr. R. L. Carlton of Winston-Salem. A progressive health officer of his type participates in numerous activities. He could tell of many successful endeavors and perhaps a few failures which would be beneficial to his fellow health workers.

For this issue of the BULLETIN we have selected just one of the many endeavors in which we think he has pioneered and excelled. The Child Health Supplement to the Winston-Salem *Journal and Sentinel* has for 14 years been a publication which could properly be used as a model.

* * * *

YESTERDAY'S SCHOOL CHILD Major Peasley's thought-stimulating paper should focus our attention not only on our failures of the past, but upon our duty to the school children of today. It will be some months or years before we have data from North Carolina's Selective Service examinations which are compa-

ral to those of 1917-18 that we may use for accurate and critical study, but we can tackle today's problems without doubting their magnitude.

* * * *

MEETINGS During the week of May 11th there will be meetings of vital importance to public health. The Medical Society of the State of

North Carolina begins its annual conference on that date. Many important problems will be discussed. Following the Medical Society meeting the North Carolina Public Health Association will hold its conference. There will be special sessions for health officers, nurses, sanitarians, and secretaries, as well as general meetings of interest to all health workers.

George R. Ward

By G. M. COOPER, M.D.
North Carolina State Board of Health
Raleigh, N. C.

NOW and then a man comes to the Legislature of North Carolina with the determination to represent as near all the people of the State as possible. He does not join for trading purposes the lawyer bloc, the farm bloc, the labor bloc, the oil company bloc, the corporation bloc, or any of the special aggregations who come here for the purpose of getting as much as they can for themselves and the interest they represent. Such a man is generally a lawyer; he is generally a man of good education, of sound, common sense, and of good standing in his church and community; such a man was the late Senator George R. Ward of Duplin County, who died at his home in Wallace March 14th.

Senator Ward's able support of Public Health legislation in the notable legislature of 1917 was a contribution to the cause of Public Health in North Carolina which has been surpassed by few if any members of the legislature before or since. Some of the laws enacted in that legislature were among the most important from a Public Health standpoint ever enacted in North Carolina. Representative Walter Murphy of Rowan County was the Speaker of the House that year. Mr. Ward was made Chairman of the House Commit-

tee on Appropriations, one of the two most important committees of the House. He discharged his duty with meticulous care and in a manner which was fair to every interest of the State, and particularly so to the large segment of the population who up to that time had received little of the benefits of modern Public Health Administration. The last law sent through for ratification in the House before final adjournment, about five minutes before the gavel fell was the law which had previously passed the Senate and has since been known as the State Aid Law. It carried a small appropriation; hence it was trusted to Mr. Ward's committee. The small sum was placed at the disposal of the Secretary of the State Board of Health to extend small grants in aid to counties, on a monthly basis, wishing to set up a whole-time health department. That was the first such procedure ever legalized in this State. It meant the beginning of a system which is today the backbone of Public Health work all over the United States. The only difference is that for the last six years the Federal government has far overshadowed the financial support of the State's to the counties. Mr. Ward put this law through at the last minute over the opposition of some of the

most potent politicians in the State serving with him that year in the House. The day before the legislature adjourned this particular bill was conveniently "lost." Readers experienced in legislative methods will understand the meaning of the word "lost" in this connection. The bill was "found," however, just before sine die adjournment. The parliamentary play necessary in which Mr. Ward demonstrated that he was a master strategist was in forcing the opposition to withdraw their insistence for a "call for a quorum." Naturally the bill could not have passed otherwise. Such a man and legislator was George R. Ward.

The privileges extended through this law now for 25 years has not been abused by the State Board of Health and has been instrumental in establish-

ing some of the strongest local health departments in the State.

He was a graduate of the University of North Carolina, and he loved the institution and all of the things for which it stands with consecrated loyalty. He served in the House of Representatives again in 1925 and 1927 and finally a term in the Senate from that district in 1939. In all of those sessions he maintained the same high standard of service to all of the people of the State. Through all of it he was a bulwark of strength for the Public Health forces of North Carolina. He set a standard for service in the legislature which we hope many a young man in the future will follow. His counsel and his friendly help to the health forces of this State will be missed for a long time to come.

How Can I Prepare My Child for the Future?

By JOHN A. SHAW, M.D., F.A.A.P.-F.A.C.P.
Fayetteville, N. C.

SEVERAL parents have asked me recently, "What must I teach my child?" and this question suggested to me the subject of my talk today. What can we do for the children of today to equip them for the duties of tomorrow, to enable them to get the most happiness out of living and to keep for themselves their heritage of a free country? We should provide them with some fundamentals which have been proven sound and to which they can turn again and again for help in solving their problems.

We cannot foresee the conditions which we must prepare them to meet, but unless we are exceedingly optimistic most of us will agree that they will be very different from any experienced in the past. There is now and perhaps

there will be in the future more realism in life. The protective coat of a highly developed civilization may be partially or entirely wiped off. You may say that I am a pessimist, but I say that those who are too optimistic today may some day be the theme of a treatise on "While America Slept." Our golden age is past for a while. We have been the world's most favored people, living in the nearest modern approach to a Garden of Eden, but our standards of living will of necessity come down.

The genius of this country, which has been directed toward the production of things to make life more abundant, is now being carried into other channels. We are going to have to do more for ourselves, and to find pleasure in ourselves. We will have fewer of them

served to us at very little cost and with practically no exertion on our part. It is going to be a harder existence than our children will face.

There will be less chance for personal initiative and more necessity for conforming to a general pattern that will gradually be evolved. The new conditions may be of such nature that all will have to be brought under stricter rules and more direct control. While we shall still be the masters of our own destinies, we shall be regulated more, and the regulations may be burdensome to those who have been taught to recognize very little authority.

The child of today—the citizen of tomorrow—is going to need all the fortitude, courage and adaptability of the first settlers to work out a happy and successful existence. What can we do to help him?

As physicians, our first thoughts are naturally devoted to preserving for these children healthy bodies and normal minds.

As our preparedness program expands, there is going to be a greater shortage of doctors for the civilian population. There may be a tendency to lessen the work done by the national and state bureaus along the lines of child welfare. There may be, if we are not careful, a tendency to revert to symptomatic treatment and to think less in terms of a lifetime when we examine a child. There may be a shortage of medicines; there may be epidemics, especially in those areas where many are gathered together. There may be shortages of certain foods.

Before any of these possibilities face us we must prepare to meet them. As regards the possible shortage of doctors, there is little to be done except by reducing our outside activities as much as possible in order to be better prepared for the eventuality if it occurs.

At the first signs of any lessening of governmental health work, doctors should appeal as a body for no curtailment. The nation is going to need a sturdy race and the medical profession is the one most responsible for this. They should be the first to point this out to the public and the governmental agencies.

The tendency to symptomatic treatment will be a personal problem for the individual doctor. We have gone a long way in preventive medicine and the need for it was never more imperative. The profession should redouble its efforts to get the whole population protected from as many diseases as possible. The work that has been done in the past makes this easier. We should try to continue the education along health lines that has already done so much for the people.

This nation has never had a scarcity of foods and medicine. We have had too much. While other nations have had to try to preserve foodstuffs, we have had to restrict production. We have had to kill hogs and restrict farming so that our surplus would not be too great. We shall always have plenty of food requisites. We may have less of the delicacies. The can opener may be relegated to a place of less importance in the household, but there will be plenty to put in the old-fashioned jar. Home canning should regain much of its lost popularity. Thrift in feeding the family and care in the planning of diet must be practiced. People will "eat to live," not "live to eat." Medicines of importance will be had in abundance, but, as with foodstuffs, there may be some scarcity of those that are not essential.

Just as important as preserving the health of our children is teaching them to use their bodies and minds to secure both mental and economic security. I believe that children should be taught

to work and to adapt themselves to any situation. The average American child is adaptable and will learn to take care of himself if the occasion arises. In recent years, however, the trend has been to give the child more and more pleasures and to require less and less the assumption of any duties. To give much and expect little is the usual custom of the American parent. This theory may be all right if the conditions the child will face are those that will conform to a familiar pattern. On the other hand, is it fair now to make life for the child a bed of roses when the path to be trod in the future may be covered with thorns instead of rose petals? We should teach him to work. The more anyone is able to do for himself, the better he will be fitted to face any situation in which he may be placed. A gradual realization that changes are taking place is much better for a young mind than the sudden discovery of the fact. Unquestionably, in my opinion, the present younger generation is not as well fitted to face the vicissitudes of life as were their parents. It is not their fault, but the fault of their parents, who want the best for their children and who are putting protective walls around them. Many parents pride themselves on making things easy for their children, and by the very giving and spoiling have wrecked their chances of happiness.

For the parent who asks, "What must I teach my child?" I say again: Teach them to work. Instill in them faith in themselves, faith in their country and faith in their God. Start with the home and teach them the meaning of authority; teach them respect. Let them know of the hardships

of past generations and help them to formulate ideals from which we, as a nation, have drifted away—ideals, beliefs and faith which were the cornerstone in the formative years of our country. Teach them to use their hands; teach them the real glory of labor, of a job well done. Teach them to get away from the artificial and to come back to the natural things of life. This applies not only to pleasures, but to the very art of living. Help them to learn to be independent and in a large measure to be able to carry on for themselves.

In attempting to get across to youth that this is their country, that they in their generation will own and control it, would it not be a good idea to get for each child a share of stock, small though it might be, in this, their own corporation? Take the money that would be put in some nonessential and get them a baby bond. Explain what it is; put across to them that it is a share of stock in their government, and that its value will depend upon the continued stability of their government. Get this for them by depriving them of something else and let them know it. This might in some cases, give them a tangible instead of an intangible idea of what their connection with their government is.

In conclusion, would it not be wise to get back gradually to some of the fundamental principles and practices of life; to help parents get a different outlook as regards their duties to their children; and thereby to help educate the children to create for themselves a place in a changing world?

Health Supplement to Newspapers

By R. L. CARLTON, M.C.

City Health Officer

Winston-Salem, N. C.

OME one has aptly said that health education is an art and a science—the art of interpreting items of information to the public so that they will be understood and the science of transmitting the information so that the public will react in the desired way.

Every health officer realizes the importance of keeping his public informed if his health program is to succeed. A part of health education is telling about the problems of the community, such as its sickness and death rates, its communicable disease incidence, its accident hazards and other risks, the ability of preventive medicine to cope with certain of these things, the facilities of the community especially as they pertain to medical and public health activities—in short, to keep the public informed as to what the health problems are and what should be done about them.

To accomplish this desired end every means should, of course, be used—pamphlets, bulletins, reports, letters, exhibits, posters, demonstrations, lectures, addresses, personal instruction, advertising, both regular and special editions of newspapers or sections thereof.

The purpose of this article is to say something about the annual May Day Child-health section of the *Journal and Sentinel*, daily papers of Winston-Salem. Most health departments in North Carolina do not have sufficient funds to consider for a moment the possibility of a press agent or publicity manager, yet it is realized fully that the daily press is the principal means by which public opinion can be reached. So, the health officer must be his own reporter as occasion demands, and make

his own contacts with the editors, convince them of the earnestness of purpose of his health department, and further convince them, as our editor has been, that "anything coming from the health department which is calculated to save human life and promote public welfare is news and papers should use such material." For a good many years Winston-Salem papers have generously given space for health articles of various kinds contributed by the health department, so that when approached for a special section devoted to child health to be issued on May first there was little or no difficulty encountered.

Of course the business of the newspaper is to record the news and to earn money by its circulation and its advertising, so, the idea for a special section was sold first to the editor who in turn recommended the project to the business management and the advertising departments. There has been through all the 14 years during which this special section has been published the finest kind of coöperation by every one connected with the paper. The advertising division has secured more than the usual amount of advertising all of which is tied in with material in this section by calling attention to some phase of baby or child health and welfare. Evidently the advertising more than pays for the section from a financial point of view.

The special section is well illustrated which adds to its attractiveness. The pictures are provided by the paper's staff photographers who work closely with the health department in selecting the subjects for illustrations so as to

be timely, interesting and helpful for the story or article to be illustrated.

The reading material for this special section is provided in almost its entirety by the local health department at the request of the newspaper. This does not mean that all the articles are written by members of the health department; some of them are; others are contributed by doctors, particularly pediatricians of our own or neighboring cities; articles are secured from the State Health Department; from the United States Public Health Service, and the Children's Bureau; from officers and prominent authorities in the National Tuberculosis Association and the American Medical Association, as well as the American Public Health Association.

A word about the special articles—these are not by any means "canned stories," but are original articles prepared and contributed at the request of the health officer who has personally written for them and with his request has gone a word of description of the paper and its interest in child health and suggesting that this is a means of getting over to the public in a single dose quite an important lot of worthwhile health educational material. Nearly always there is a favorable response with the story on the subject suggested and usually the article reaches the department of health by the time limit set—which deadline for time is always mentioned. Some of these articles are too long and sometimes the subject matter will almost duplicate that in another story and under these circumstances there is no hesitancy on our part to cut the article down or revise it to fit, and in practically all instances contributors have asked that their stories be edited or cut as may be needed.

There have been used articles pertaining to practically every phase of child health beginning with prenatal instruction and following with care of babies in summer, the teething bugaboo, how to feed and clothe and exercise baby and how to give him a sun-bath and stories about the baby health stations or clinics where mothers may bring their babies and learn what to do for their welfare. The protection of babies against smallpox and typhoid and diphtheria is stressed; the prevention of many other diseases is emphasized; there are stories of what to do for the preschool child, getting him ready for school and of what should be done for him and by him after he enters school. Stories regarding periodic health examinations not only for young children, but also for adults find a place. The correction of physical defects and early diagnosis and treatment of tuberculosis are always appropriate stories—and when these stories are written by such authorities as Dr. P. P. McCain or Dr. Kendall Emerson or Dr. J. A. Myers with a short paragraph of a few lines telling the reader who the author is it is our opinion that the average father or mother will have confidence in the story and have a feeling that such information should be kept for future consultation—which perhaps may be done.

The illustrations help materially in emphasizing the health message. For example, a line of boys and girls shown laughingly awaiting their turn for a tuberculin test or a toxoid immunization at the hands of the school physician encourages all children to come along and demand such for themselves; pictures of a modern dairy or pasteurization plant emphasize the importance of clean, wholesome milk and so help the milk campaign; a picture showing a waiting room full of babies and moth-

ers at a baby clinic makes the mother who sees it wonder if she ought to take her baby to such a clinic; pictures of milk-fed children are always appropriate; pictures showing activities of the laboratory or the public health nurses on their rounds or perhaps holding preschool clinics and many other such illustrations have found their way into our child health section.

It is the feeling of the health department that such a special section is worth all the effort it costs. To be sure these articles appearing in the special supplement might be used singly in the regular paper from time to time through the year, and so could the pictures, but having the health articles fill a whole section with the many pictures accompanying them constitute a weighty punch not to be had by one story or one picture, and too, this department would not have quite the effective appeal to make to our special contributors

to secure these articles if we were only working up a health column instead of an entire section.

This project has seemed to have pleased the newspaper for it has been continued year after year for more than a dozen years; comments of parents and citizens generally indicate that the thing is appreciated by the public; the health department is glad to have such an opportunity to consider not only the child of today, but also the father of tomorrow. May Day, when all the world is taking on beauty and renewed energy and freshened strength, is a most auspicious moment to take an inventory of achievements in the child health program and to plan to overcome the weak spots. These challenges are to be met not by parents alone, but by whole communities and by the nation. We think the May Day Child Health section of our papers is a step in the right direction.

Examination of Yesterday's School Children

*By ELMUS D. PEASLEY, M.D., Major, Medical Corps
Medical Officer for North Carolina State Headquarters
Selective Service System
Raleigh, N. C.*

THE task of increasing the armed forces of the nation under the Selective Service Law of 1940 has offered an opportunity to evaluate the physical condition of the young men of our nation.

Men registered in the first registration on October 16, 1940, represent the school children of the period roughly from 1910 to 1930. The study of the causes for rejection of these men by the Army may reveal certain trends and possibly indicate certain preventive measures for the benefit of the school children of today.

There have been various opinions expressed concerning what seems to be a relatively high rejection of selectees by the Army; some very pessimistic, some relatively optimistic. It has seemed that these opinions have expressed somewhat the bias of the author. In any event, insufficient facts are at our disposal to warrant any authoritative conclusion. The only analysis that is in any way complete, so far as an accurate detailed report is concerned, is to be found in Medical Statistics Bulletin No. 1 issued November 10, 1941, by national headquarters

of the Selective Service System. This report analyzes in detail 19,923 physical examination reports from all sections of the nation, but it should be very obvious that this number represents a very small sampling from which erroneous conclusions may readily be drawn. However, since it is the only report upon which trends may be predicted, it may be used for that purpose, provided the limitations are recognized.

In evaluating any statistics concerning the physical qualifications of registrants, the following points must constantly be borne in mind:

1. Prior to our declaration of war selectees inducted under the Selective Training and Service Act of 1940 were required to pass an unusually rigid physical examination. Relatively minor defects were grounds for rejection. This policy was in force primarily due to the fact that there was no actual national emergency, that it was essentially a peace-time training program, that each selectee, after his training, was to become a member of the Reserve Corps for a period of ten years or until he attained the age of 45 years. Consequently, the War Department's policy was to pick men for which there would be assumed the least liability and who could be trained into an efficient nucleus for a large army if the need arose. Before the training program was well established, however, war was upon us and as a result the physical standards for the armed forces have been markedly reduced with the object of rapidly enlarging our forces to fight an enemy who is at hand.

2. Many selectees have been rejected because of relatively minor physical defects. There is a general lack of desire on the part of these selectees to voluntarily have the defects corrected when such action would render them liable for military service.

3. Since only registrants who do not have dependents have been called by Selective Service, it seems reasonable to assume that many men, especially in the upper age group, have not married due to physical handicaps. This assumption seems to be supported by the fact that nearly twice as many men were rejected in the age group 31-36 (61%), than in the age group 21-25 (34%), with an extreme of 29 percent for the 21-year-olds and 70.1 percent for those 36 years of age.

The initial analysis reveals that out of approximately two million registrants examined about fifty percent were not qualified for general service. Approximately 25 percent were qualified for limited service and 25 percent were wholly unqualified.

The various causes for rejection for general military service are listed in the following table:

TABLE I

	Percent
Teeth.....	20.9
Eyes.....	13.7
Heart and blood pressure.....	10.6
Muscles and bones.....	6.8
Venereal.....	6.3
Mental and nervous.....	6.3
Hernia.....	6.2
Ears.....	4.6
Feet.....	4.0
Lungs.....	2.9
Miscellaneous.....	17.7

Certain of these defects are conditions that may be prevented, certain ones are remediable, and many represent congenital defects or conditions for which the future holds little hope of improvement until medical science advances, the general economic status improves, education is more universal, or eugenics programs are more forcefully carried out.

The defects listed in Table I may be briefly discussed with the above viewpoints in mind.

Teeth—The chief factor in reducing these defects in the future would seem to be a better economic status for those affected, not only that they may have a more complete diet as a preventive measure, but also that restorative dental work may be accomplished early. Teeth and venereal disease are the only groups of defects whose elimination in near totality appears feasible at some indefinite time in the future.

Eyes—No diminution in the incidence of eye defects may be expected by early refraction except in a few selected cases. Early improvement in vision by refractive correction would frequently improve the quality of a child's school work, but would not prevent the development of these defects.

Heart and Blood Vessels—Syphilis as a cause for the heart disease encountered has played a very small role in this age group. It seems unlikely that any marked improvement can be expected in the future, except for those cases which are the result of acute rheumatic fever, and there is no immediate hope here. Many ailments of the blood vessels are developmental.

Muscles and Bones—The after effects of infantile paralysis is chiefly shown in this group but it contributes only a very small portion. Poor nutrition, especially in childhood, has contributed its share.

Venereal Disease—Practically all of these represent infections acquired in early adulthood. The importance of an effective educational program in school children cannot be overestimated. The recent wave of publicity given to these diseases has allowed their names to be spoken in public. A few well-chosen and well-presented cases from the venereal clinics and wards of our hospitals would impress the receptive minds of our school children much more strongly than could any other single act that comes

to mind. To assume the attitude that *they must not know* is to assume the ostrich's defense. KNOWLEDGE IS POWER. Loss of a child's confidence is accelerated by low-rating his intelligence. Adequate and universal treatment of those affected is also a primary premise for the reduction of these diseases.

Mental and Nervous—So long as our heredity remains the same, and with the increasing tempo of modern living, we may expect not a decrease but an increase in these ailments. Our efforts should be expended in evaluating the ability and stability of the individual so that his talents will not be overestimated. He can then be trained for the job which will fit his capabilities.

Hernia—This again is a defect which is essentially congenital. Hernia develops from an inborn weakness or may be created by accident.

Ears—Defects of the ears, which are so frequently the result of chronic infections, may in the future show some decrease as a result of the use of the sulfa drugs. It will be most interesting to review the incidence of these diseases twenty years hence.

Feet—Congenital factors here are very significant and there appears to be little in the way of prevention. Possibly, more general physical education may aid in the strengthening of the organs of locomotion. The tire shortage may be a blessing in disguise. For us to discover we have feet would not be a calamity.

Lungs—Comparatively little improvement may be expected in the future. Tuberculosis is still the major cause of lung disease and it is difficult to tell how much further the ravages of this disease may be reduced. The last thirty years has shown tremendous progress but we are approaching a minimum, providing vigilance is not relaxed.

Miscellaneous—This group is a very composite one and the future depends upon the nature of the disease or ailment. Those due to infection hold some hope of improvement.

The interesting fact has been brought up that the average height of registrants is 67.5 inches, the average weight 150 pounds with an average chest measurement at expiration of 33.9 inches. Recruits examined during World War I had an average height of 67.5 inches, average weight of 142 pounds and average chest measurement at expiration of 32.2 inches.

The average height for men examined for military service in the Federal forces during the Civil War was 67.5 inches, average weight of 136 pounds and the average chest measurement at expiration of 33.5 inches. These figures would tend to indicate that our general state of nutrition is improving although we do know there is much individual malnutrition.

If we must have another war, let us not only hope that the physical vigor of our youth has improved in the meantime, but that they may be sufficiently trained so as to insure the maximum protection to their nation and to themselves.

Books

New or nearly new books and booklets which may interest our readers. We have not read them, but some may be worth buying—others worth borrowing:

VITAMINS AND MINERALS FOR EVERYONE, Alida Frances Pattee. G. P. Putnam's Sons, New York. \$2.00.

MODERN HOME MEDICAL ADVISER, Morris Fishbein, M.D., Editor, J.A.M.A. Nelson Doubleday, Inc., Garden City, N. Y.—905 pages. \$2.48.

TOUGHEN UP AMERICA, Victor G. Heiser, M.D. Whittlesey House, McGraw-Hill Building, New York, N. Y. \$2.00.

UNDERSTANDING YOURSELF: THE MENTAL HYGIENE OF PERSONALITY, Ernest R. Groves. Emerson Books, Inc., New York, N. Y.—279 pages. \$2.50.

WORRY AND ITS CURE, Rev. P. D. Woodall—32 pages, 12 cents. Rev. P. D. Woodall, Louisburg, N. C.

STRANGE MALADY, Warren F. Vaughan. Doubleday-Doran, New York, N. Y.—255 pages. \$3.00.

THE MICROBE'S CHALLENGE, Frederick Eberson, Ph.D., M.D. The Jaques Cattell Press, Lancaster, Pa.—354 pages. \$3.50.

ABOUT OURSELVES, James G. Needham, Ph.D. The Jaques Cattell Press, Lancaster, Pa.—276 pages. \$3.00.

INTRODUCING INSECTS, James G. Needham, Ph.D. The Jaques Cattell Press, Lancaster, Pa.—129 pages. \$1.50.

THIS CHEMICAL AGE, William Haynes. Alfred A. Knopf, 501 Madison Ave., New York, N. Y.—407 pages. \$3.50.



MELISSA ANN RABB

Age 10 months; daughter of Mr. and Mrs. A. C. Rabb, Asheboro, N. C., who saw to it that Melissa was reared according to the State Board of Health advice.

LIVE BIRTHS, INFANT MORTALITY AND MATERNAL MORTALITY
UNITED STATES, 1940

STATE	LIVE BIRTHS		INFANT MORTALITY (Death in the 1st Year of Life)		MATERNAL MORTALITY	
	Number	Rate Per Thousand Population	Number	Rate Per Thousand Live Births	Number	Rate Per Thousand Live Births
United States.....	2,860,399	17.9	110,984	47.0	8,876	3.8
Alabama.....	62,925	22.2	3,864	61.4	386	6.1
Arizona.....	11,754	23.5	991	84.3	59	5.2
Arkansas.....	38,359	19.7	1,752	45.7	187	4.9
California.....	112,011	16.2	4,411	39.4	312	2.8
Colorado.....	21,154	18.8	1,266	59.8	86	4.1
Connecticut.....	25,195	14.7	858	34.1	71	2.8
Delaware.....	4,597	17.2	225	48.9	25	5.4
District of Columbia.....	15,309	23.1	719	47.0	45	2.9
Florida.....	33,818	17.8	1,814	53.6	219	6.5
Georgia.....	64,998	20.8	3,761	57.9	370	5.7
Idaho.....	11,712	22.3	495	42.3	42	3.6
Illinois.....	123,193	15.6	4,343	35.3	366	3.0
Indiana.....	61,963	18.1	2,596	41.9	178	2.9
Iowa.....	45,464	17.9	1,670	36.7	159	3.5
Kansas.....	28,695	15.9	1,093	38.1	107	3.7
Kentucky.....	63,591	22.3	3,358	52.8	229	3.6
Louisiana.....	50,916	21.5	3,271	64.2	272	5.3
Maine.....	15,119	17.8	809	53.5	61	4.0
Maryland.....	30,251	16.6	1,499	49.6	84	2.8
Massachusetts.....	66,114	15.3	2,478	37.5	186	2.8
Michigan.....	99,108	18.9	4,038	40.7	289	2.9
Minnesota.....	53,083	19.0	1,769	33.3	118	2.2
Mississippi.....	52,575	24.1	2,854	54.3	330	6.3
Missouri.....	62,172	16.4	2,913	46.9	229	3.7
Montana.....	11,492	20.5	581	46.2	35	3.1
Nebraska.....	22,162	16.8	792	35.7	71	3.2
Nevada.....	2,061	18.7	107	51.9	10	4.8
New Hampshire.....	8,503	17.3	340	40.0	27	3.2
New Jersey.....	58,617	14.1	2,086	35.6	175	3.0
New Mexico.....	14,744	27.7	1,468	99.6	69	4.7
New York.....	196,888	14.6	7,322	37.2	585	3.0
North Carolina.....	80,582	22.6	4,629	57.4	416	5.2
North Dakota.....	13,356	20.8	603	45.1	23	1.7
Ohio.....	114,900	16.6	4,759	41.4	370	3.2
Oklahoma.....	44,574	19.1	2,214	49.7	177	4.0
Oregon.....	17,848	16.4	588	32.9	45	2.5
Pennsylvania.....	165,680	16.7	7,400	44.7	538	3.2
Rhode Island.....	10,805	15.1	413	38.2	27	2.5
South Carolina.....	44,380	23.4	3,024	68.1	301	6.8
South Dakota.....	11,619	18.1	456	39.2	40	3.4
Tennessee.....	55,815	19.1	3,052	54.7	265	4.7
Texas.....	126,687	19.7	8,685	68.6	583	4.6
Utah.....	13,559	24.6	551	40.6	36	2.7
Vermont.....	6,694	18.6	301	45.0	24	3.6
Virginia.....	55,208	20.6	3,272	59.3	248	4.5
Washington.....	28,141	16.2	1,005	35.7	86	3.1
West Virginia.....	42,103	22.1	2,269	53.9	140	3.3
Wisconsin.....	54,848	17.5	2,041	37.2	154	2.8
Wyoming.....	5,052	20.1	234	46.3	21	4.2

**TOTAL NUMBER OF BIRTHS AND DEATHS UNDER ONE YEAR OF AGE
(EXCLUSIVE OF STILLBIRTHS) AND MATERNAL DEATHS IN EACH
COUNTY, WITH RATE PER THOUSAND LIVE BIRTHS, 1940**

	TOTAL BIRTHS BY PLACE OF BIRTH					TOTAL BIRTHS BY PLACE OF BIRTH					
	INFANT MORTALITY PLACE OF DEATH	MATERNAL MORTALITY PLACE OF DEATH	TOTAL BIRTHS BY PLACE OF BIRTH	INFANT MORTALITY PLACE OF DEATH	MATERNAL MORTALITY PLACE OF DEATH	TOTAL BIRTHS BY PLACE OF BIRTH					
	No.	Rate	No.	Rate	No.		No.	Rate	No.	No.	
Entire State.....	4,511	56.0	433	5.4	80,522	Johnston.....	55	37.5	3	2.0	1,468
Alamance.....	30	27.2	2	1.8	1,103	Jones.....	15	64.4	1	4.8	233
Alexander.....	9	28.0			321	Lee.....	19	37.8	5	9.9	503
Alleghany.....	14	93.3	1	6.7	150	Lenoir.....	75	71.1	11	10.4	1,055
Anson.....	40	51.7	5	6.6	774	Lincoln.....	31	62.2	2	4.0	498
Ashe.....	39	81.4	1	2.1	479	McDowell.....	29	52.1	2	3.6	557
Avery.....	28	62.2	3	6.7	450	Macon.....	22	57.3	1	2.6	384
Beaufort.....	79	87.8	8	8.9	900	Madison.....	24	48.7	2	4.1	493
Bertie.....	58	75.5	2	2.6	768	Martin.....	33	52.1	1	1.6	634
Bladen.....	46	62.0	3	4.0	742	Mecklenburg.....	168	53.8	15	4.9	8,061
Brunswick.....	29	71.3	6	1.2	407	Mitchell.....	17	42.6	2	5.0	899
Buncombe.....	102	47.8	7	3.8	2,135	Montgomery.....	7	23.9	2	6.8	293
Burke.....	23	29.2	5	6.4	737	Moore.....	28	46.1	4	6.6	608
Cabarrus.....	75	66.8	3	2.7	1,122	Nash.....	99	70.8	15	10.7	1,398
Caldwell.....	47	47.0	7	7.0	999	New Hanover.....	86	67.3	10	7.8	1,277
Camden.....	9	100.0	2	2.2	90	Northampton.....	21	32.2			652
Carteret.....	26	66.8	4	10.3	889	Onslow.....	40	87.3	1	2.2	458
Caswell.....	21	44.2	3	6.3	475	Orange.....	9	26.0	1	2.9	346
Catawba.....	60	50.0	4	8.3	1,200	Pamlico.....	11	47.2			233
Chatham.....	17	36.6	2	4.3	464	Pasquotank.....	27	74.6	8	8.8	862
Cherokee.....	22	44.9	6	12.2	490	Pender.....	21	53.3			394
Chowan.....	18	66.7	1	3.6	274	Perquimans.....	9	48.4	1	5.4	186
Clay.....	11	79.7			138	Person.....	16	26.1	1	1.6	613
Cleveland.....	68	50.9	5	8.7	1,336	Pitt.....	102	71.8	9	6.8	1,420
Columbus.....	82	64.8	7	5.6	1,265	Polk.....	14	55.8			253
Craven.....	35	54.0	5	7.7	648	Randolph.....	32	35.2	1	1.1	909
Cumberland.....	103	76.7	17	12.7	1,343	Richmond.....	48	57.5	8	9.6	885
Currituck.....	7	92.1			76	Robeson.....	143	63.9	9	4.0	2,239
Dare.....	4	46.0			87	Rockingham.....	61	54.9	7	6.3	1,111
Davidson.....	65	57.8	2	1.8	1,124	Kowan.....	52	44.6	4	8.4	1,167
Davie.....	16	50.6	8	9.5	316	Rutherford.....	46	45.2	5	4.9	1,017
Duplin.....	41	43.0			954	Sampson.....	52	43.5	6	5.0	1,195
Durham.....	134	69.5	26	13.5	1,928	Scotland.....	33	65.0	8	5.9	508
Edgecombe.....	77	63.5	4	8.3	1,212	Stanly.....	31	46.1	3	4.5	673
Forsyth.....	194	77.1	14	5.6	2,517	Stokes.....	88	72.4	1	1.9	525
Franklin.....	40	60.3	4	6.0	663	Surry.....	53	47.5	4	8.6	1,115
Gaston.....	70	40.2	6	8.4	1,743	Swain.....	13	36.7			854
Gates.....	22	89.4	1	4.1	246	Transylvania.....	19	66.7	6	2.1	285
Graham.....	5	80.7	8	18.5	162	Tyrrell.....	5	35.0	1	7.0	143
Granville.....	32	46.9	6	8.8	683	Union.....	47	47.6	2	2.0	988
Greene.....	16	32.6	1	2.0	491	Vance.....	36	52.1	5	7.2	691
Guilford.....	147	47.7	12	8.9	3,084	Wake.....	115	55.3	21	10.2	2,060
Halifax.....	88	58.4	7	4.6	1,508	Warren.....	61	101.0	2	3.3	604
Harnett.....	64	60.0	4	8.7	1,067	Washington.....	22	76.1	8	10.4	289
Haywood.....	40	56.1	4	5.0	799	Watauga.....	27	64.4	1	2.4	419
Henderson.....	25	42.3	4	6.8	591	Wayne.....	89	67.8	14	10.7	1,812
Hertford.....	32	71.9	1	2.2	445	Wilkes.....	45	40.8	2	1.8	1,103
Hoke.....	15	41.8	2	5.6	359	Wilson.....	81	64.0	6	4.7	1,266
Hyde.....	9	52.3			172	Yadkin.....	19	58.8			353
Iredell.....	80	69.4	11	9.5	1,152	Yancey.....	24	51.5	2	4.8	466
Jackson.....	32	65.4	2	4.1	489						



The Health Bulletin

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
The Expectant Mother	Instruction for North Carolina Midwives
Breast Feeding	
Infant Care. The Prevention of Infantile Diarrhea	
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THE Health Bulletin



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CARL V. REYNOLDS, M.D., *State Health Officer*

JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By JOHN H. HAMILTON, M.D., *Acting Editor*

HEALTH COMMITTEE IN his usual concise and straight-to-the-point way, Dr. Davison, as Chairman of the Health Committee of the North Carolina Conference for Social Service, has given us a list of important problems which need attention and action. Will our people meet the challenge and do something about them or will we be indifferent and let them be included in future reports of other committees?

* * *

DEFECTIVE HEARING A few pages further on in the BULLETIN Miss Thompson has given us a word picture of some of the problems of the hard of hearing. As one who has had to live with this defect as a personal handicap she speaks with authority. She reveals her own experiences, some disappointing, some unpleasant, some painful, but some that are definitely compensating and are essentially major triumphs. Hers is a buoyant spirit whose crusading zeal will win victories. She presents the cause of the hard of hearing in a manner which requires us to face the problem.

When we do face the problem of defective hearing we get only a vague view of its magnitude and a very un-

certain concept of its causes. All of us have some friend or acquaintance who has this handicap. Yet none of us knows even approximately the number of boys, girls, men and women who have defective hearing. We do know that in most instances that loss of hearing does not occur suddenly, but that it is a more or less gradual process. We do know that in many people with impaired hearing the impairment can be arrested or completely cured, if proper medical or surgical treatment is given promptly. There are new accurate methods of detecting even slight hearing defects. The old whispered voice and watch tests did not reveal loss of hearing until it reached an impairment of some fifteen to twenty per cent. The modern audiometer will detect loss of hearing when it only amounts to five per cent or less. For those whose hearing cannot be improved by proper treatment, there are such appliances as hearing aids, using electrical amplification. Lip reading instruction is frequently helpful when competent teachers are available. Even though we do not know nearly as much as we should about this problem there is much which we can do, but which we have not done with the information available.

Of the states which have attacked the hearing problem, Oregon seems to have the most complete and well planned hearing conservation program. Their mass testing of school children is done by means of a phonograph audiometer with forty receivers. As many as 120 pupils can be tested in a 45-minute period with little interference to school routine. Those children whose record indicates that they fail to hear well are retested the same day. Pupils with unsatisfactory scores in the second of those screening tests are given an individual pure tone test a few days later, thus giving those with colds an opportunity to recover. For those shown by all tests at the school to have defective hearing the first step in the follow-up is to give the child a general medical examination. If the health officer's or family physician's examination indicates that the child needs special attention, the parents are urged to select a specialist in diseases of the ear. After they have designated their selection the child's audiogram and medical inspection records are sent to the specialist who will make the otological examination. The public health nurse endeavors to see to it that the recommendations made by this physician are carried out. If the child's hearing is not sufficiently restored, arrangements are made for classes in lip reading or such other additional educational needs that the child may have. Unfortunately, we do not have data to indicate the number of children examined in Oregon, the percentage with defective hearing, the cause of impaired hearing, nor the results of treatment. In Kern County, California, however, a study of 7,200 school children showed that ten per cent or 720 of these school children had a loss of hearing of more than six per cent; that defective hearing was more frequent in rural school children than it was in cities or towns;

and that only 14 of the 123 more seriously handicapped were considered to have permanent impairments. Among these 14, accidents, mastoid operations, and communicable diseases, notably, scarlet fever, were the causes of the defects.

We have made a beginning in North Carolina. Miss Thompson recounts briefly what we have done and are doing. What we should do is vastly more than this. Even with the multitude of activities now in our health program, we should find time and money to do something to protect our young people from permanently impaired ears. The old adage is still true, "A stitch in time saves nine."

For the older people whose hearing cannot be restored by treatment there should be a clear understanding of the fact that there is no more reason why a person who is hard of hearing should not wear a hearing device than there is for those who have defective vision should not wear eyeglasses.

A word of warning should be sounded. This group has more than their share of charlatans, quacks, and patent medicine venders to prey upon them. These jackals do much more harm than merely deprive their victims of money under false pretense. These frauds waste valuable time and even do actual harm so that the unfortunates' hearing is far worse than it was before these fakers cheated them. It is always possible for persons with defective hearing to get competent advice about the help they need.

* * *

IMMUNIZATION CAMPAIGN Shortly after the May BULLETIN went to press, money was made available for a widespread Immunization Campaign. For several weeks Dr. G. M. Cooper had been working on this program. After which delay he secured approval of the Chil-

dren's Bureau for a budget of \$28,000 to be expended in not more than fifty counties. This money is being used to pay clinic fees to doctors and nurses and for the purchase of toxoid and whooping cough vaccine. This is the first time that an Improved Whooping Cough Vaccine has been used in such an immunization campaign in this State. It represents a definite forward step. It is unfortunate that the cost of the Whooping Cough Vaccine (50c to protect each child) must limit the use of this product, but when 10c worth of diphtheria toxoid will protect a child from diphtheria, it is only good economy to spend public health dollars where they will buy the most protection. The mere fact that Improved Whooping Cough Vaccine is being used in this campaign should do much to convince the parents of North Carolina's children that protection from whooping cough is a possibility and that it is worth buying. The old reliable products, smallpox vaccine and typhoid vaccine, are also being used in this campaign. These are being supplied without charge to the program by the State Laboratory of Hygiene. Because of budgetary limitations this campaign must be concluded by June 15th so that all costs may be paid before the end of the fiscal year, June 30th.

Even though the time for carrying out the campaign has been so short and all arrangements were necessarily made in a hurry, there has been little confusion. Without doubt tens of thousands of our citizens will be given protection by this campaign at a cost of only a few cents per person. One good feature of an immunization campaign is that many natural procrastinators will want immunization badly enough after the campaign is over to go to their doctors and pay regular prices for it. Immunity from diph-

theria, smallpox, typhoid fever, and whooping cough is a bargain at any price. It is the best buy in anybody's "Buyer's Guide."

* * *

MILK For many years milk has been an important subject to health workers. Milk has been a part of the title of many papers, scientific journals and popular publications. It has also been the topic of many speeches and more conversations. To some of our readers it may be an old, old story, but to those who are not completely familiar with all of its aspects, Mr. Jarrett's paper should be good news. It is generally recognized that milk is the most important single food. It is an indisputable fact that as a people North Carolinians use far too little milk and dairy products. Why then should we not try to secure new information about such an important food. Mr. Jarrett has great responsibility for the protection of milk supplies in North Carolina. Milk is a subject in which he is keenly interested and about which he can speak with authority.

Those whose duty is the safeguarding of milk are justified in pointing out the fact that numerous diseases may be caused by milk. It is equally true that disease may be caused by failure of individuals to consume sufficient milk. Each adult should ingest at least one pint or its equivalent in dairy products each day. Growing children should have at least one quart. Malnutrition due to failure to consume sufficient milk is even more prevalent than infectious diseases due to milk. As sensible citizens, we should use plenty of milk, but we ought to be certain that it is safe milk.

BOOKS

"Time and the Physician"—Lewellys F. Barker. An Autobiography—G. P. Putney Sons, New York, N. Y. 1942. 350 pages. \$3.50.

Hear Ye! Hear Ye!

By MARGARET M. THOMPSON, M.S.
201 Charlotte St.
Asheville, N. C.

THE next time you meet some one who is hard of hearing tell him, or her, about the American Society for the Hard of Hearing. But, you say, I don't know anything about it; how can I tell others? Well, then, here are some of the important facts regarding that organization. Read them and then you will be able to pass on the information.

In the first place, one thing makes it different from any other organization for handicapped people—it is the only one *started by the handicapped people themselves*. People without handicaps got busy and did something for "the lame, the halt, and the blind"; even, in late years, something was done for the *deaf* (those who lost their hearing before they learned speech, or who were born deaf), but they only neglected the hard of hearing (those who lost all or part of their hearing after they learned speech). I think the explanation may lie in the fact that while it is easy to imagine what it means not to see or to be unable to get around easily, it is almost impossible to realize what loss of hearing, even partial, means; hence our pity for the crippled, the sightless, and our misunderstanding of the deafened, misunderstanding often expressed in ridicule or contempt for their blunders or apparent stupidity. We laugh at them or let them alone, and I don't know which is worse!

The first society for the hard of hearing grew out of a lip-reading class, taught by Edward B. Nitchie in 1911 in New York City. By 1919 there were nine such societies and the late Dr. Wendell Phillips, an ear specialist, led a movement to organize them into a

national body. This new organization at first had the title of American Federation of Organizations for the Hard of Hearing, but it took so much time and so much wind or ink to say or write all that that in 1935 or thereabouts the name was changed to its present form.

The American Society for the Hard of Hearing has headquarters at 1537 35th St., N. W., Washington, D. C. It has several full-time, paid staff members who work there and who also make trips into the field. It conducts a national biennial conference. (1942 is the regular year for that, but because of the war it has been cancelled for this time.) Together with the Volta Bureau (founded by Alexander Graham Bell with the money he received from the Volta Award from France for his invention of the telephone; its object is to aid the cause of deaf children) it publishes a monthly magazine, *The Volta Review*. It also sends to all its members a small monthly news sheet, *Hearing News*, which has items of interest from the work going on over the country. The American Society has exhibit material to loan to educational, medical and other gatherings. It conducts a correspondence club, "The Everywhere League" for deafened people out of reach of a local organization. I have belonged to that club for eight years and recommend the making of friends by mail as a most enjoyable experience for any one who likes to write letters.

For convenience, the American Society is divided into eight zones in the United States, each with its own officers. In the years between national conferences each zone has its own. It

is a thrilling treat for a hard of hearing person to go to one of these. Those local societies owning group hearing aids generously loan them for the occasion, so every one with any usable hearing at all can hear all the inspiring, interesting and informative talks and even the banquet program. Wonderful! The Society keeps literature on various subjects relating to deafness on hand for distribution. It keeps a file of up-to-date information on hearing aids—also on quack deafness "cures." In short, the American Society is a service organization, in the best possible sense of the word, for the hard of hearing.

The big purpose behind organizing societies for the hard of hearing is the securing of united action on the problems that this handicap produces. Acquired deafness creates tremendous difficulties in the life of the one deafened. The young person finds his choice of a vocation greatly limited. The older one may have to change his occupation or become permanently unemployed. One is apt to drop out of or be left out of the activities he once engaged in. His life becomes a lonely one and, especially if he loses his job, he is apt to develop the feeling of uselessness or of being unwanted. He needs help badly, and the people best equipped to give it to him are the outgoing people who have traveled more or less far along the same road of readjustment that he will have to take. They have the sympathy and understanding of a common experience to help him with. Not only can such societies help those who become deafened, but they can do something even more important—they can work together on a program of hearing conservation and deafness prevention so that in the future not so many will have this devastating handicap to cope with.

To cover all these needs the American Society and local societies have these goals:

"To improve the conditions and relieve the misfortunes of persons whose hearing has been lost or impaired; to serve as an information center on problems of defective hearing; to improve the educational, economic and social conditions among both children and adults whose hearing is impaired; to stimulate scientific efforts in prevention of deafness and the conservation of hearing; to organize new societies for the hard of hearing; to promote the efficiency of existing organizations; to remove unjust restrictions on the hard of hearing in obtaining life insurance and employment; to stress the importance of annual hearing tests and proper medical treatment for children; to urge the study of lip reading and the use of hearing aids; to urge in any way possible medical research on the causes, treatment, and prevention of deafness."

These goals have been set up for years. In 1940 the American Society began a concerted drive to achieve some of these goals through legislation. Mr. Conrad Selvig, ex-Congressman from Minnesota, himself hard of hearing, is chairman of a National Committee on Legislation, under whom are state chairmen, working toward these legislative goals: annual hearing tests in the schools, with adequate follow-up work; lip-reading instruction for both children and adults as part of the school system; group hearing aids in any school with as many as five hard of hearing children; vocational guidance and job placement service for the hard of hearing; full-time workers for the hard of hearing on the staffs of both the State Departments of Health and of Education; training centers for the hard of hearing in every State Teacher's College.

What are we doing in North Carolina? We have barely scratched the surface but we *have* made a beginning. To my knowledge, Winston-Salem had the first local organization, about ten years ago, but it disbanded after a short while. That city also had the first audiometer to be used in this state, I believe, also about ten years ago. Nothing more was done until the fall of 1937 when, under the leadership of Dr. G. M. Cooper, Assistant State Health Officer, the State Board of Health bought an audiometer. For the two school years following, tests were made in schools in four counties and five towns of the State, almost 41,000 children being tested. The work is still carried on by the State Board of Health with a staff nurse in charge. Dr. R. A. Herring, City Health Officer of High Point, has been carrying on a good program of hearing testing and follow-up work since the State Board of Health made tests there in 1938. The High Point program will be a fine demonstration of the need for this work and what can be done about it.

The second local society in the state was organized in Asheville in the summer of 1941. This society is small but we hope it will grow and become

strong enough to make a real contribution to this very worth-while work.

The big need is for people informed as to the needs and how they can be met and who are willing to work to help meet the needs. There are many rewards in it. The bond of understanding that our common handicap produces is food for our spirits, too often tragically accustomed to *mis*-understanding; with the desire and the determination to have them, any society, no matter how small, can have what many of them do have—rooms of their own for meetings, parties, lip-reading classes, lectures, vesper services, games; group hearing aids to hear the lectures and programs otherwise denied so many; the genuine pleasure of working together in a great cause. The field is large; especially is this so in the prevention of deafness. Who among us who know the heartbreaks of impaired hearing but wouldn't exert ourselves so that some of *the children* threatened with deafness will not have to grow up and live their lives under the handicap we have? Who in North Carolina will join in this work? It is, and will be, hard and uphill—so is pioneer work in any field. But the work can be done—and pioneering's fun!

Why You Should Demand Grade A Milk

By J. M. JARRETT

Sanitary Engineer in Temporary Charge, Office of Milk Sanitation
State Board of Health

MANY articles have appeared in this bulletin in the past relative to clean and safe milk supplies—articles stressing the importance of milk in the diet—in fact the subject of milk and milk sanitation has been discussed from just about every angle. Regardless of the above, we think it wise to reconsider this problem.

It is particularly important at this time when "priorities" and "freezing" are words of the day not to let ourselves forget or become unmindful of the necessity of maintaining safe and healthful standards of living. In times of stress, such as we are now experiencing, many things may seem important and may be given first considera-

tion by us to the detriment of our health.

Therefore let us consider briefly the significance of the Grade A label that appears on the cap of your milk bottle and try better to appreciate its value and what it really stands for in health protection.

There are two main factors which interest the state and local health officials in milk and dairy sanitation. These are the source and the quality of the supply you use. The health officials are interested in the source, because as a measure in the prevention of disease—which is the underlying principle of public health—they know that raw milk affords a most excellent means of transmitting certain disease organisms; and to minimize the chances of infectious and communicable diseases being spread through unclean milk, they realize the sanitation of premises and the conditions under which milk is produced and handled are of utmost importance.

They are interested in the quality of the milk, because this product is a necessary and almost perfect food for both children and adults when it is obtained from healthy and disease-free cows and when handled in a sanitary manner. It is also known that the more abundant use of milk depends in many cases on its effect on the senses, such as smell, taste, and the amount of visible cream. These are closely associated with the quality.

The two items just referred to, quality and source, are so closely related that it is difficult to consider one without the other, especially since both items form the basis of the grading system in use in this State and contribute to the reasons why your bottle of milk carries, or at least should carry, a Grade A cap or label.

The ordinance, or regulations, under which your milk supply is produced in

the counties and cities in North Carolina is known as the U. S. Public Health Service Milk Ordinance. This ordinance is in use in thirty-six other states.

The ordinance is effective because of the system used in grading the milk and dairy. Grade A Pasteurized is, of course, the safest milk that you may secure, followed by Grade A Raw and Certified.

It is true that lower grades of milk are allowed to be sold in some cities and counties, just as carbolic acid and bichloride of mercury tablets are allowed to be sold by your druggist. But these drugs are marked POISON with the familiar skull and cross-bones. The druggist by thus labeling these products has conformed with the law. If you buy and then take these drugs internally the outcome is your responsibility and not that of the druggist. The product was properly labeled and you injured yourself by not heeding the warning label.

The same principle applies to the labeling of milk. You may be buying and giving to your children an inferior product marked Grade B, C, or D just because it is a few cents cheaper or because some relative owns a cow and wants to dispose of the surplus supply. If you do this and the result is sickness in your family or possibly a death, the responsibility is yours. Your health department through its system of grading the milk supply has given this grade to the milk because, in their opinion, it is a second, third, or fourth-class product and is not the safest or best supply you may obtain.

Unclean milk, carelessly handled by unclean or negligent employees, may transmit several communicable diseases to you. There is ample proof on file with the U. S. Public Health Service and the various state and local health departments to show that epi-

demics of these diseases traceable to unprotected milk supplies very often occur. The most common communicable diseases transmitted through milk, listed according to the number of cases reported, are:

1. Septic sore throat.
2. Infantile diarrheas.
3. Typhoid and paratyphoid fever.
4. Tuberculosis.
5. Scarlet fever.
6. Undulant fever.
7. Diphtheria.

Tuberculosis is transmitted through the milk from cows infected with tuberculosis or from a person infected with tuberculosis coughing directly into the milk or in other ways coming in contact with it after it leaves the cow and before it reaches you.

Typhoid organisms thrive in milk once they gain access to it. They may reach the milk through the carelessness of an employee who is a typhoid carrier and not clean in his habits, thereby allowing particles of his feces and urine to find their way into the milk.

Septic sore throat, scarlet fever, and diphtheria may be transmitted through milk. The organisms of these diseases may be transmitted to the udder and teats of the cow by an infected person and from there deposited in the milk supply every time the cow is milked. There is the possibility also of the milk becoming infected by the dairyman or dairy worker coughing or coming in direct contact with the milk or milk equipment.

Undulant fever is transmitted to the person using the milk from cows infected with contagious abortion.

Each year many babies under two years of age die from colitis and diarrhea caused by giving the babies unsafe milk.

It can be readily seen, therefore, that an ordinance, or regulations, which will insure the proper sanitation and handling of the milk and milk products is one worth while and one designed to keep at a minimum the spread of the diseases mentioned above. Your best assurance, however, that you are being protected as far as is humanly possible from contact with the disease-causing organisms is to demand that the milk served you be Grade A pasteurized milk. If you insist on using raw milk, the safest thing is to boil it or be sure that it comes from a dairy that rates high with the local health department and is produced and handled under conditions which are as sanitary as possible.

To explain a little more in detail the requirements for the production of Grade A milk the following condensed items taken from the State and Public Health Service Milk Ordinance, which are the main items of sanitation back of the Grade A cap on your milk bottle, are given:

1. Cows must be tested for tuberculosis and other diseases and all reactors or cows infected with tuberculosis must be destroyed.
2. Dairy barns must be constructed so as to provide adequate light and ventilation. The floors, walls, and ceilings must be kept clean and in good repair. No other stock, such as fowls, pigs, horses, etc., are allowed in the milking barn.
3. Cow yard must be kept clean and drained as well as practicable, and manure must be disposed of properly to prevent the breeding of flies.
4. The milk house in which milk is handled and bottled must be clean, well ventilated, and properly lighted. Facilities must be provided for the adequate washing and sterilization of utensils and

containers. Sterilizing cabinets must be provided for the sterilization and storage of equipment after each usage. All outside openings to the milk house must be adequately screened against flies, and no doors shall open directly into the barn or into living quarters.

5. A sanitary toilet or other approved means of sanitary excreta disposal must be provided.
6. The water supply must be adequate and safe.
7. Utensils used in the handling of milk must be of approved construction and must be kept clean and handled and stored in a sanitary manner.
8. The cows' udders, teats, and flanks must be clean at time of milking.
9. Hand washing facilities must be provided for the employees.
10. Milk must be removed immediately after milking from the barn to the milk house and cooled to 50 degrees F. or lower within one hour. Bacteria multiply rapidly in warm milk, and it is necessary, therefore, that milk be cooled in order to keep the number of bacteria down.
11. Automatic bottling and capping machines must be used. Hand capping is not allowed.
12. All employees or persons coming in contact with the milk or cows must have a health certificate showing that they are free from the communicable diseases transmitted through milk.

It may readily be seen by those who give the matter any thought that the above mentioned items, required in the production of Grade A milk, are based

almost entirely on sanitation and pertain to factors which vitally affect the public health.

Too often we as consumers take for granted that the food we buy and consume is handled under sanitary conditions, or that the health department is looking after things for us. There are at present in North Carolina 83 county and six city health departments that are striving daily to protect the food you eat and the milk you drink. These departments, which may be rightfully called the outer line of defense in the protection of your health and the health of your family, need your support and co-operation if they are to wage successfully a most important battle for you. If you live in one of the 83 progressive counties of the State or in one of the six progressive cities you are indeed fortunate. But you can increase the effectiveness of the health protective measures undertaken by your health department if you will co-operate with your department by demanding that the milk and other food served to you are clean and wholesome products, produced under sanitary conditions and handled in a manner approved by your health department.

When we remember that the Army and Navy consider milk sanitation vitally important, and insist on the products served our armed forces being of the highest quality, and when your State Board of Health is co-operating with the armed forces to certify to them the milk supplies being used in the various army camps in the State, the least you can do is to demand that the dairyman serving you and your children maintain the necessary safeguards around your milk supply.

And She Cried All Night

By W. YATES LEAGUE, D.D.S., *School Dentist*

State Board of Health

MARY, stop making such a face when you are at the table."

"My tooth hurts, Mama."

"Well, we'll have to have it fixed as soon as we can spare the money. Now run along and get dressed, you have to get your hair fixed this afternoon."

Mary's tooth stopped hurting and she soon forgot all about it. Several nights later when Mary was slow in coming to help with the dishes Mrs. Jones threatened, "Mary, come here this minute or I will take you to the dentist tomorrow and he will fix you."

Mrs. Jones, who tried earnestly to be a good mother, was doing her small daughter an injustice in several ways. In the first place, she was leading her to believe that having her hair fixed was more important than having her teeth fixed. In the second place, she had threatened to take her to the dentist as a punishment for something she had done. Of course Mary did not want to go to the dentist since she had been led to believe it was a means of punishment rather than a place where she could be benefited.

Parents should teach their children that their teeth are as much a part of their beauty as their hair. It is as easy to have a child think it a treat to visit the dentist as it is to have him think it a form of punishment. Especially is this true if the child is taken to the dentist at regular intervals rather than waiting until the damage done by neglect is irreparable. Most dental treatments can be done without pain if the dentist is visited regularly.

But what happened to Mary? She neglected to have her tooth looked after by the dentist, although it hurt her sometimes when she ate sweets or something cold. One Sunday night she awoke suddenly with a sharp, pulsating pain in her tooth; every one in the house was awakened by her cries. Dr. Smith could not be reached, and her mother could find nothing to help the sore, aching tooth. Now, Mary was really suffering, for she belonged to that great multitude of dental cripples. And she cried all night.

Mouth Health Quiz

Test your knowledge of mouth health. Each question counts five. You should make a score of 85, but 65 is a passing grade.

The answers are on page 16.

QUESTIONS

1. How many foundation or baby teeth are there?
2. Is it important to take care of the baby teeth?
3. When should the child first visit the dentist?

4. What important dental development takes place when a child is about six years old?
5. How many permanent teeth are there?
6. When do the permanent teeth begin to form?
7. What is the relationship of diet to tooth structure?
8. What should the diet contain to make good teeth?

9. What foods are the best sources of calcium?
10. What foods furnish phosphorus?
11. What foods supply vitamin A?
12. What are the best sources of vitamin C?
13. How is vitamin D supplied?
14. What is the most common dental defect?
15. What part of the tooth does decay first attack?
16. How can dental caries be prevented or corrected?
17. How often should a person visit his dentist?
18. Can the dentist always fill a decayed tooth?
19. Can the claim that a clean tooth never decays be substantiated?
20. How often should the teeth be brushed?

Report of the Health Committee North Carolina Conference for Social Service

By WILBURT C. DAVISON, M.D., *Chairman*
Dean, Duke Medical School
Durham, N. C.

AN educational as well as legislative program is recommended to improve the health of the public by the following measures:

(a) *The reduction of deaths from tuberculosis*—everyone should have a tuberculin test; if negative it should be repeated annually. Positive reactors should have X-ray, laboratory and clinical examinations; if the tuberculosis is quiescent a chest X-ray should be repeated annually, and if the process is active, treatment should be given.

(b) *The reduction of infant and maternal mortality*—Three fourths of the 240,000 annual deaths of American children can and should be prevented! One fourth of these deaths are from antenatal, natal and neonatal preventable causes, one third from postnatal preventable causes, and only one fifth are due to diseases for which adequate therapy is available.

(c) *Immunization*—All infants should be immunized at the following ages: *Three months*: smallpox vaccination; *four months*: Pertussis vaccine; *nine*

months: combined alum diphtheria and tetanus toxoid; *12 months*: typhoid-paratyphoid vaccine.

(d) *The reduction of "colds" in school children*—The system of allotting teachers to schools on the basis of pupil-days instead of pupil-enrollment increases the spread of respiratory infections, because many teachers do not realize the risk in urging the attendance of children who have "just a slight cold." If these children were kept in bed at the onset of the illness, recovery would be more rapid, contact cases avoided, and the pupil-days increased.

(e) *The reduction of brucellosis (Malta or undulant fever)*—All cafes in North Carolina which receive the rating of A by the State Board of Health, should purchase, use, and sell only pasteurized milk.

(f) *The prevention of lye poisoning*—The sale of lye should be prohibited or only allowed with a more prominent warning label, because the hospitals throughout North Carolina are each year reporting numerous cases of chil-

dren between the ages of one year and six years, who have swallowed lye and other corrosive material, which their parents or other persons have left exposed; the resulting damage to the mouth and esophagus may cause inability to swallow and death from starvation.

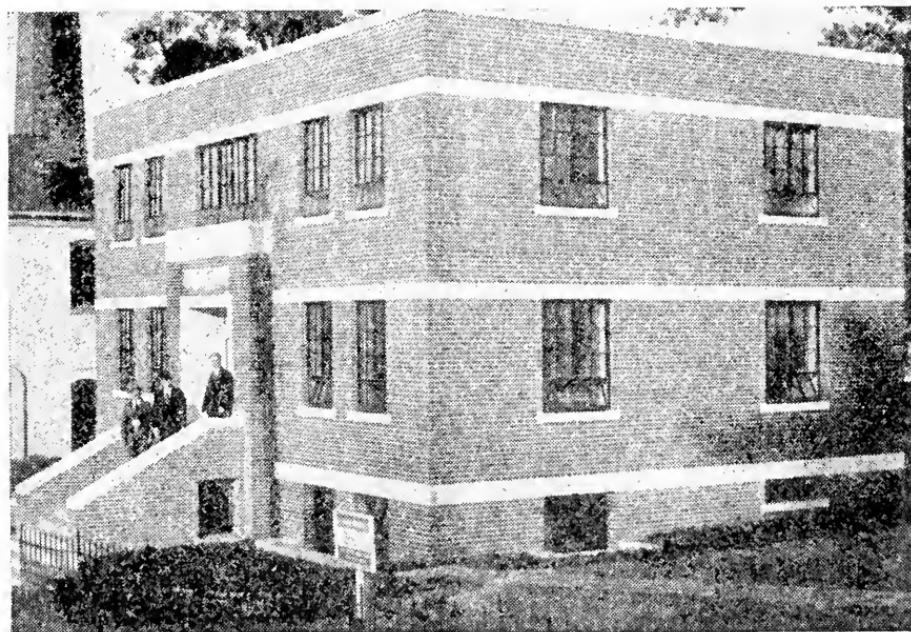
(g) *Antenatal (antepartem)* care by the physician, who is to deliver the child, and the antenatal hospitalization of mothers who need it will save many babies. Over one half of infant deaths are under one month of age. The oftener a pregnant woman visits her physician the greater is the probability of her having a normal, living infant. In Denver, Colorado, among 1,000 mothers who had antenatal care, 178 of the infants died, while only 15 infant deaths occurred among 1,000 mothers who had nine or more prenatal consultations. Greater efforts should be made to persuade expectant mothers, not only of the advisability, but of the necessity,

of visiting their physicians at frequent intervals.

(h) *Periodic examinations*—Every infant should be given a careful and complete examination immediately after birth, and at daily intervals during the first week, monthly intervals during the first year, every three months during the second year, every six months from three to six years, and annually thereafter. These *periodic examinations* should include a complete history, physical examination and laboratory tests, a discussion of the child's physical and mental problems, his diet, an inventory of his behavior assets, liabilities and patterns, and of the family's socio-economic factors, and written instructions to the parents.

(i) *Dental care*—After the age of two years, every child should be seen twice a year by a dentist.

(j) *Good nutrition* and adequate diets are essential to health.



ORAL HYGIENE BUILDING

DISINFECTION OF DRINKING WATER IN CASE OF EMERGENCY

During the present national emergency or during floods or droughts, the public water supply may be damaged, making it unsafe for human consumption or it may become necessary to secure water from private wells or springs of unknown, questionable or unsafe quality. In either case, the water should be boiled or disinfected in accordance with one of the methods described below:

Boiling—If fuel is available, the most reliable method of rendering water safe for drinking purposes is by boiling for at least two minutes.

Disinfection—If fuel is not available, the water should be disinfected as described below. The following equipment is needed:

1. A bottle or jug or other suitable vessel of one gallon capacity.
2. Medicine dropper.
3. One of the disinfecting agents noted below.

Chloride of Lime or Bleaching Powder—This powder is available at most grocery stores. Make a paste with one level spoonful of chloride of lime powder and a little water. Then add this paste to a one-quart bottle of water and shake thoroughly. Allow the resulting disinfecting solution to settle. This solution loses strength and should be replaced with freshly prepared solution each week. Add one teaspoonful or 75 drops of this solution to one gallon of water in the bottle or jug. Mix thoroughly and let the disinfected

water stand at least 30 minutes before using. For the disinfection of larger quantities of water add one teaspoonful of the disinfecting solution to each gallon of water, such as 50 teaspoonfuls to 50 gallons of water in a barrel.

Note—One ounce of chloride of lime powder made into a paste will disinfect 1,500 gallons of water if thoroughly mixed with the water.

Zonite—This disinfectant is sold in drug stores. Add 10 drops of Zonite to a gallon of water, let the disinfected water stand at least 30 minutes before using. Seven teaspoonfuls of Zonite will disinfect 50 gallons of water.

Liquid Bleach—Add two drops of one of the laundry bleaches sold in grocery stores to one gallon of water. Let the disinfected water stand at least 30 minutes before using. "Clorox," "Dazzle," "White Sail," "Rainbow," "Rose-X" and other commonly available laundry bleaches containing five percent of chlorine by weight may be used; or add four drops of bleaches like S. K. or "101 Solution" containing 2½ percent chlorine by weight to one gallon of water. (See label on bottle.)

Tincture of Iodine—Add four drops of tincture of iodine sold in drug stores to one gallon of water. Mix thoroughly and let stand at least 30 minutes before the water is consumed.

Reprinted from circular by New York State Department of Health.

The commercial products named in this circular were mentioned merely because they are readily available. This reference to them should not be interpreted as an endorsement of these commercial preparations. There are doubtless others that are of equal merit.

ANSWERS TO QUESTIONS ON PAGES 12 AND 13

1. There are twenty foundation teeth.
2. Yes. It is just as important to take care of the baby teeth as it is to take care of the permanent teeth.
3. When a child is about two years old or when all of the foundation teeth are in his mouth he should be taken to a dentist.
4. The first permanent tooth, the six-year molar, erupts when a child is about six years old.
5. There are thirty-two permanent teeth.
6. The permanent teeth begin to form at birth. They grow and develop under the baby teeth they are to replace.
7. The elements necessary for the building of good teeth are supplied by the diet.
8. The diet should be made up of foods containing calcium, phosphorus and vitamins A, C and D.
9. Milk is the best source of calcium. Many of the green, leafy vegetables contain it.
10. Milk, sea foods, lean meats, beef liver, eggs and whole grain cereals are rich in phosphorus.
11. Whole milk, other dairy products and cod liver oil are good sources of vitamin A.
12. Citrus fruits and tomatoes contain vitamin C.
13. Exposure to the sunshine is a source of vitamin D. Cod and other fish liver oils contain vitamin D and should be included in the diet during the winter months.
14. Tooth decay or dental caries is the most common dental defect.
15. Decay first attacks the enamel. It usually starts on a surface that is in contact with another tooth or in a groove in the chewing surface.
16. The best way to prevent or correct dental caries is for the individual to visit a good dentist regularly.
17. A person should visit his dentist at least twice a year.
18. No. If the decay has reached the pulp the tooth may have to be extracted.
19. No, but cleanliness is a factor in preventing decay.
20. The teeth should be brushed at least twice a day, after breakfast and before going to bed at night.

How do you score putting into practice your Mouth Health knowledge?



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CARL V. REYNOLDS, M.D.

State Health Officer

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care	Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Prenatal Letters (series of nine monthly letters)	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
The Expectant Mother	Instruction for North Carolina Midwives
Breast Feeding	
Infant Care, The Prevention of Infantile Diarrhea	
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THE Health Bulletin



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CARL V. REYNOLDS, M.D., *State Health Officer*

JOHN H. HAMILTON, M.D., *Acting Editor*

Notes and Comment

By THE ACTING EDITOR

CONJOINT SESSION STATE law requires that there be held each year a conjoint session of the Medical Society of the State of North Carolina and the State Board of Health. In times gone by these have been rather dramatic. Promptly at high noon of the second day of the annual meeting of the Medical Society the President of the State Board of Health would step to the forefront, pound his gavel upon the table and announce: "The Conjoint Session of the State Medical Society of the State of North Carolina and the State Board of Health is now in session." Sometimes he would thus interrupt another speaker in the middle of a sentence, but at 12 noon the scene shifted from the problems of healing the sick to programs concerning the prevention of sickness.

The first item of business of the Conjoint Session is the presentation of the report of the State Health Officer. This report has always outlined the programs, activities and accomplishments of the State Board of Health during the preceding year. Sometimes the report of the Health Officer touched off heated arguments; sometimes the election of members of the Medical Society to membership in the State Board of Health would require hours of ballot-

ing. In recent years these sessions have been less dramatic and exciting, but they have not ceased to be interesting.

At the 1942 meeting of the Medical Society held at Charlotte Dr. Reynolds presented his report to the Conjoint Session, beginning promptly at noon, May 13th. The importance of this paper justifies its publication in this issue of the BULLETIN. This is the eighth report which Dr. Reynolds has submitted to the Conjoint Session. If we were to look back to his first report and compare the activities recounted for 1934-35 with those of the present report, we would get a comprehensive idea of the rapid progress which has been made in the intervening period. It is to be remembered that in 1934 this State Board of Health was still in the throes of financial difficulties brought on by the depression. It was not until the 1935 General Assembly passed its appropriation bill that public health work began to stage a comeback. Then the grand strategy of Dr. Reynolds became apparent. With each advance he planned new objectives. When an opportunity came within the reach of his alert vision he seized it and then cast about for a new opening in the rising fog. If we go from report to report, we find a surprising number of new accomplish-

ments. In each one you will find that same spirit of justified pride in past performances but in bolder outline you will see the desires of a farseeing man to improve the services dedicated to the protection of the health of the people.

* * * *

REPORTS An annual report always starts off with a great handicap. If it is for an institution with a wide variety of programs and a multitude of activities, that handicap is immeasurably increased. Lack of time in which to tell or want of patience on the part of the listeners requires that an account of the work done be condensed. If the report is to be printed, the space which can be devoted to it is limited. All the indications and requirements combined to boil down to the point of maximum concentration necessitates the leaving out of many interesting details which would make listening or reading more interesting. The work of any one division of the State Board of Health for a single day could not be reported properly in the space available to this issue of the BULLETIN. If we did have this uncondensed report, we could have details and color with which to hold the readers' interest. But the problem is to present the work of ten divisions done in three hundred working days and to do so without increasing the space available. Something must be sacrificed. We must lose detail and color and leave only facts and figures. Even these must be sorted over, picking some for inclusion and some for deletion. It is somewhat like taking a lusciously juicy steak and trying to put as much of its pleasing and nutritious goodness as possible into a small pill. It can be done, but we lose all the flavor and most of the meat.

In his opening remarks Dr. Reynolds told his hearers that what he was presenting was a synopsis of a synopsis. He knew that his voice would be tired

before he ended the report and that the minds of his listeners would be weary from trying to find space in their memory for fact after fact. With the good spirit and courage so characteristic of the man, Dr. Reynolds proceeded to give the report which you will find in this issue. He will be pleased, if you would read it from beginning to end. We would suggest, however, that you do not attempt this as a non-stop feat, but that it be read rather leisurely and thoughtfully. It is concentrated food for thought. Attempting to read too much of it at one time might cause mental indigestion. Without careful reading you cannot hope to have a comprehensive idea of the work of the State Board of Health.

* * * *

MEDICAL SOCIETY More than seven hundred physicians registered at the 1942 meeting of the Medical Society of the State of North Carolina. Military uniforms were numerous. Many of the papers dealt with problems of the physician in the Army and war time activities of physicians in the services of civilians. The mental attitude of those in attendance was more serious than it has been since the first World War. It was apparent that the physicians of North Carolina have taken a high and solemn resolve to render the maximum service of which they are capable.

* * * *

N. C. PUBLIC HEALTH ASSOCIATION More than four hundred workers attended the meeting of their own health organization. Here too, we heard serious discussions of war time problems. No one who attended the meeting could doubt the desire of all health workers to render any service of which they are capable. Programs for the health officers section, the nurses section, and the sanitary inspectors section were well up to usual standard. It is encouraging to

note that this year the secretaries section had a program which came well up to professional standards. This youngest group of health workers already deserves special recognition. Those who do not now recognize them as professional health workers will soon do so.

* * * *

DOCTOR ENNETT Doctor N. Thomas Ennett of Greenville, North Carolina, is the new President of the North Carolina Public Health Association. He is a gentleman of scholarly attainments who can be trusted to lead this Association during the trying months ahead. His long years of experience and his calm and unhurried judgment will be reassuring during these troublesome times.

NEW SECTION PROPOSED The way is now open for the formation in the State Public Health Association of a section for laboratory workers. A resolution was passed at the Charlotte meeting, creating the Laboratory Section, provided as many as 25 laboratory workers join in the section. Approximately 15 local health departments now have laboratories to assist them in carrying out their programs. The State Laboratory of Hygiene has a staff of approximately sixty, forty of whom are actually performing laboratory work. It would unquestionably be helpful if the people who are confronted with laboratory problems could meet and discuss questions which are of mutual concern to them.

ANNUAL REPORT

North Carolina State Board of Health to Conjoint Session State Medical Society

*By CARL V. REYNOLDS, M.D.
Secretary and State Health Officer
Raleigh, N. C.*

SUCH expressions as "We Did It Before and We'll Do It Again," and "Remember Pearl Harbor," are expressions foremost in my mind and I feel sure are foremost in your minds at this moment, and recalls vividly to us the all-important fact that we are facing an all-inclusive war, which, if it affects any one class more than another, that class is the medical profession. We constitute a group, the members of which have the rare privilege of being the custodians of man's mental and physical well-being.

George Washington said: "It is of infinite moment that you should properly estimate the immense value of preven-

tative medicine. Watching for its preservation with jealous anxiety." President Franklin D. Roosevelt said: "The state's paramount concern should be the health of its people."

The cream of American manhood, physically speaking, is being called to the colors, and many now are actually at the front, fighting to preserve the gains for which their forefathers sacrificed, in many instances, their all, for the sake of generations then unborn. All of us, I am sure, would make the same supreme sacrifice for that wonderful heritage; and, if necessary, the soldier in the front ranks should have priority rights. The nature of the pres-

ent war will necessitate that it be fought not on one front, but on many fronts, so interdependent that the neglect of any one will mean the failure of the whole. We have our armed forces on land, on sea, under the sea and in the air—two and a half million of them now, with an anticipated ten million. In this army are our sons and our daughters—brave, strong, physically fit, fighting for all we hold dear as a free people, determined that the rights achieved for us in baptisms of blood shall not perish from the earth.

We must bear in mind and always have before us as our chief concern just how we may assist these, our children at the front, in the winning of a glorious victory. We must maintain, at the same time, the second front—our industrial front, sixty million strong, which demands our attention and constitutes an essential complement to the success, safety and welfare of our boys at the front. There is a third front, and I refer here to the civilian front which must be protected and which is comprised of a class that has suffered most in foreign lands, up to this moment.

What a stabilizing influence on the boys at the front would be the knowledge that their loved ones at home were being adequately protected and cared for! This comes home to the realist when he thinks of what happened in the Hawaiian Islands, when 3,800 were destroyed—of what happened in Malaya, in Burma, and what likely will happen in India, Australia and the far-flung islands of the sea, if proper protection is not afforded. We know what happened to Guam and Wake Island, after Congress had refused to appropriate the infinitesimal sum of \$5,000,000 for the improvement, fortification and adequate protection of the harbors there, against Japanese attack.

The full meaning of preparedness cannot be overemphasized. We were

prepared for the first attempted invasion of Ceylon, from which island our fighters hurled the Japanese. We were prepared at Corregidor, which held out for five months after the fall of Manila, after the fall of Bataan, against Japanese onslaught.

To accomplish preparedness, we must be realistic, not emotional. We must use judgment in placing our manpower where it is most needed; we must realize that, in this the greatest assignment that ever confronted us, the man in uniform and the man at home are serving their country with equal patriotic sincerity. There must be mobilization on all fronts with a full determination of placing our manpower where it can do the most good and where it can render the greatest service without regard for our personal desires or our financial aggrandizement. It is our patriotic duty to make sacrifices at home in order to render service to those at the front, and—mark my words well—the man who fails in this is remiss in the high ideals that should motivate each of us at a critical time like this, and to the obligations he owes to his country and humanity.

My point is this: Every one of us has a place to fill and that place is an important and essential one. In mobilizing for an all-inclusive war we must first procure the personnel to man all stations, and loss or victory in this war will depend primarily on the proper assignment and placement of such personnel.

We have in the United States 180,000 doctors, of whom 155,000 are now in active practice. A total of 28,000 will have been called in the next thirty or sixty days, leaving 127,000 for the protection of the civilian population. Twenty-eight thousand properly selected out of 155,000 is not, to my mind, of serious consequence. Why? Because the proper selection and distribution of the

remaining 127,000 would protect the civilian population. It is your duty, and it is my duty to volunteer where we can serve best. Each of us must ask himself this vitally important question: What can I do to make a real contribution toward the winning of this war?

Since the coming of the Great Physician, the physician has had the admiration of the nation and for this glorious heritage, are proud and will, I am confident, sacrifice self, personal aggrandizement for our country's safety at the front, at home, or wherever that front or home may call us.

The normal activities of your Health Department function in all divisions with full speed ahead notwithstanding the enormous growth due to the many additional demands brought about by, first, the defensive, and now the offensive war program. So numerous are the projects that only a mere listing can be mentioned leaving a complete report for your consideration for a more convenient time. It is hoped that when the annual report is sent to you that you will give it a careful reading in that you may know and realize the vastness, the extent and the many fields through which it ramifies.

We are proud that we have been able to establish, in our School of Public Health at Chapel Hill, a department of Public Health Nursing. The Department of Public Health Nursing is an integral part of the School of Public Health and it utilizes courses of the school to supplement those offered by the staff of the Department of Public Health Nursing.

The objective of the Department of Public Health Nursing is to acquaint students with modern trends in this specialized branch of nursing and to furnish a broad base upon which to build procedures of a more selective type. The program in public health nursing is open to graduate registered

nurses who meet the matriculation requirements of the University. However, each applicant's academic, professional and personal background is reviewed by a faculty committee.

Perhaps some of those who were present at the 1940-41 meetings have wondered why my reports have not referred more specifically to what is being done in the field of nutrition. The contributions that have been made by several of our divisions have, of course, been referred to, and much has been done through the medium of the State **HEALTH BULLETIN**, the press and the radio. The brevity of these references, however, does not mean a lack of appreciation of the importance of the proper nutrition of our people, nor does it mean that we have not been giving serious consideration to the problem. The fact that many of our citizens have poor dietary habits and for various reasons, by no means always due to poverty, are malnourished to a greater or lesser degree is well known to us. But our policy here, as well as in other fields of health work, has been to study the problem and to become familiar with it before attempting to inaugurate measures for its prevention and control.

In January, 1940, the State Board of Health, Duke University Medical School, and the Rockefeller Foundation organized a unit known as the Coöperative Nutrition Studies. The purpose of this organization was to study the nutritional status of representative groups of populations in several different parts of the State with a view to the acquisition of knowledge relating to just what deficiencies actually exist, and to the extent and severity of these deficiencies. In conducting these surveys, which are still in progress, we are making use of all the clinical and laboratory tests that are considered practical for field work by those best qualified to express an opinion. In addi-

tion to a seven-day study of the dietary intake of each individual in the groups considered, the deficiencies for which there are generally accepted methods of diagnosis for use in such a survey are: calories, protein, riboflavin, vitamin C, rickets and nutritional anemia. Such studies have now been in progress for a little over two years.

With the knowledge emanating from these studies, therefore, North Carolina is perhaps in a better position than almost any other state to conduct its nutrition program along sound scientific lines. At any rate, we now have a well-organized State Nutrition Committee with an administrative board consisting of the heads of the State Department of Agriculture, Welfare, Health and Education, the State Agricultural Extension Service, and the Federal Works Projects Administration and Farm Security Administration. The coöperative spirit that has prevailed at our meetings augurs well for the future of a clearly defined program that has been unanimously approved. Thus, while the development of our State nutrition program has perhaps been somewhat less spectacular than that of some other states, we have every reason to believe that the foundation upon which we are building is firm and that our preliminary period of preparation will prove to have been well worth while.

Introduction of health education specialists, under the direction of Dr. Lucy Morgan, has proven very effective and has elicited the interest of literally thousands of women in all classes in the counties where the program has been launched, and in each instance has developed enthusiastic interest in their participation in health activities in their communities to the extent that it has proven to be one of our most effective instruments in making the entire citizenry health conscious.

The Division of Preventive Medicine—
DR. G. M. COOPER, Director.

An outstanding accomplishment this year for this division was the post-graduate work carried on during the year at Duke Hospital and Medical School, directed by Doctors Makepeace and Lawson. Ninety-four white physicians and 16 Negro physicians attended the five-day courses in obstetrics and pediatrics. Doctors Davison and Carter of the pediatrics and obstetrics department there coöperated in every way possible. The success of this postgraduate course is unique in that nearly every physician who attended expressed his satisfaction at the quality of instruction offered as well as the general helpfulness from the Duke faculty and the student body. Rooms in the dormitory and meals at the doctors' dining room were provided free of charge for all the physicians attending. Those attending the postgraduate course came from practically every general section of the State.

The maternity and infancy clinic activities have been extended to 72 counties, and 291 separate clinics are being held. About 200 practicing physicians are coöperating in the conduct of these examinations.

Crippled Children's Activity: The continued goals of the Crippled Children's Department are: (1) to locate crippled children; (2) to register these under proper medical classification, and (3) to provide treatment designed to reclaim physical ability as far as possible.

At the close of the year 1941, there were 18,924 cripples on the State register representing an increase of seven percent over the previous year.

There are 22 clinics available for the examination and diagnostic classification of indigent persons in need of orthopedic examination or consultation; 11,630 examinations were carried out. These examinations represented 4,411

first admissions and 7,219 return visits of children. Twelve qualified orthopedic surgeons participated in these services, aided by workers on State and local levels. The diagnostic services described are available to all ages of orthopedic cripples. Exclusive of the State Orthopedic Hospital, there are 20 selected general hospitals with an average capacity of 125 orthopedic beds; one convalescent home which is operated by a private nonprofit corporation and which has a capacity of 20 beds.

On January 1, 1941, there were 181 children under care in hospitals and during the period 1,439 others were admitted, for a total of 1,620 children for whom care was provided in hospitals during the year. Thirty-nine percent of this number were admitted to the State Orthopedic Hospital; 61 percent were provided for in selected general hospitals. Of the above number 1,421 were treated and discharged.

The field of endeavor, now an accepted responsibility of the government, will be in ratio to the support which all the people give to those interested and active in this type of service.

LIST OF DEFENSE BASES IN NORTH CAROLINA, TOGETHER WITH ESTIMATED MILITARY POPULATIONS

Active:

Camp Bragg.....	65,000 to 70,000
Camp Butner (under construction).....	30,000 to 35,000
Camp Sutton.....	15,000 to 18,000
Camp Davis.....	18,000 to 20,000
Marine Barracks—New River (under construction).....	30,000 to 35,000
Cherry Point Marine Air Base (under construction).....	8,000 to 10,000
Air Base—Goldsboro (under construction).....	16,000
Naval Air Base—Elizabeth City.....	5,000 to 8,000
Sykes Field—Charlotte.....	2,000
Shipyard—Wilmington.....	8,000 to 10,000
Fairchild Airplane Factory—Burlington (under construction).....	8,000 to 10,000
Camp Battle—New Bern.....	2,000
Air Squadron—Wilmington.....	2,000
Naval Air Cadet Training School—Chapel Hill.....	2,000

Also:

Coast Guard Air Base—Elizabeth City.....	500
Camp Glenn—Morehead City.....	500
Shell Loading Plant—Carrboro.....	600
Naval Repair Station—Southport.....	500
Naval Repair Station—Morehead City.....	500

Division of County Health Work—Dr. R. E. Fox, Director.

With the addition of Carteret and Iredell counties since we last met, we have 83 of the 100 counties in North Carolina under full-time health service, or to express it another way, 95 percent of our population are now receiving services from qualified public health personnel.

There are employed at the present time in the 83 counties and five city health departments (exception Winston-Salem), 668 full-time workers. This personnel, giving classifications, is broken down in a detailed report attached. The training of these persons has been made possible through funds provided from Social Security, Reynolds Foundation and the Children's Bureau.

Dr. J. Roy Hege was borrowed from the Forsyth-Stokes-Yadkin-Davie District Health Department to become director of activities in war defense areas. He has devoted all of his time to this work since May, 1941.

It might be interesting information for me to name the bases, together with the estimated military population.

Increased demands at these bases call for additional personnel in Cumberland, New Hanover, Onslow-Pender, Carteret, Craven, Granville, Durham, Union, Robeson, Cherokee-Clay-Graham, Buncombe and Wayne counties. This personnel has been paid out of an emergency health budget and through assignment of personnel by the United States Public Health Service. The personnel consists of physicians, nurses, sanitarians, technicians and clerks, totaling in number fifty.

During the maneuvers held in North Carolina in October and November, 1941, in which 500,000 soldiers participated, Dr. Hege was in charge of public health activities in the eight counties of North Carolina embraced in the maneuver area and personnel from this emergency organization was assigned to supplement existing personnel in the counties on medical, nursing and sanitation problems. We are glad to report that no outbreak of any communicable disease arose which could be attributed to the influx of soldiers or visitors. This, in my opinion, was due to the planning and the coöperation of all allied agencies in this endeavor set up previous to the coming of the soldiers. We are immensely proud that the venereal disease incidence during the maneuvers was held to about twenty per thousand as against thirty per thousand under normal conditions. The incidence previous to the maneuvers in certain bases rose as high as 66 per thousand due, in my opinion, to the lack of law enforcement agencies doing their sworn duty. It behooves us all, in this fight against the greatest evil we have today, to take active steps in our various communities to see to it that the law enforcement agencies do their duty. Spasmodic control is ineffective and only made by the enforcement agencies to camouflage.

Division of Epidemiology — DR. J. C. KNOX, Director.

In this division the Central Tabulating Unit is our mechanical statistician and reveals accurate information for our periodic reports to the United States Public Health Service, Children's Bureau, the annual morbidity reports and local information when requested. This year the counties organized under the Central Tabulating Unit showed that 12,925 new, untreated cases of syphilis, while private physicians, hospitals and other institutions reported 2,547 new, untreated cases of syphilis. In this period an average of 24,172 patients per month attended the public clinics for treatment. The clinics administered 803,329 treatments for syphilis. Counties organized under the Central Tabulating Unit reported 7,369 new, untreated cases of gonorrhea. Private physicians, hospitals and other institutions reported 1,629 new, untreated cases of gonorrhea.

A training course was held in Raleigh on April 15, 16 and 17, 1942, for new case-finding, case-holding personnel made available to the local health departments by supplemental appropriation for venereal disease control from the U. S. Public Health Service. Eighty-three additional follow-up and case-finding persons were put on duty in the various counties at this time.

Physician-Education in venereal disease control was extensively promoted during the latter part of this report by the holding of eight regional institutes at which Dr. Percy S. Pelouze, outstanding authority on gonorrhea, was the principal speaker.

Malaria: The Division of Epidemiology conducted county-wide detailed surveys in counties known to be malarious. On these surveys blood slides were taken from all children in the first six grades. The home of each

child with a positive blood slide is located with a symbol on a county map. In the focal areas thus established, detailed maps showing all homes, bodies of water and other pertinent data, are prepared. During this report year 12,127 blood slides were examined. Realizing that in previous wars many soldiers died of mosquito-borne disease, or were rendered unfit for combat, the Army, Navy, U. S. Public Health Service, and the North Carolina State Board of Health decided to establish control operations in and adjacent to cantonment areas, as well as in towns frequented by large numbers of troops. The Malaria Investigation and Control Unit prepared maps of all such areas, prepared control plans, and assisted military and naval authorities in formulating and supervising programs which were carried out on the reservations. In all areas close coöperation was maintained by the local health departments and the military and naval officials.

Division of Laboratory of Hygiene—DR. JOHN H. HAMILTON, Director.

In connection with the routine activities of the laboratory there has been no spectacular performances such as occurred in 1940 when it was necessary for the laboratory to supply large quantities of typhoid vaccine and other biologics to the flood areas of northeastern North Carolina, or to examine over 100,000 specimens of blood taken from draft registrants.

During the past 12 months 593,322 examinations have been made in the laboratory. Of these 419,240 were serological tests for syphilis on specimens taken from our civilian population and 83,694 were similar examinations on specimens received from Selective Service boards. It will be interesting to note that the laboratory has continued to

participate in the evaluation studies of serological tests for syphilis conducted by the Advisory Committee of the U. S. Public Health Service. In 1941 our Kline test had a sensitivity rating of 80 percent. The Control Laboratory—Kline, 76 percent. Both tests had a specificity rating of 100 percent. Our Wassermann, the Eagle complement fixation test had a sensitivity rating of 68.9 percent. Eagle's Laboratory, control for this test, was 80.7 percent. Our specificity rating was 100 percent; the control, 98.8 percent.

We have continued to conduct evaluation tests for the laboratories within the State which have been approved for the making or serological tests for syphilis under the marriage law. The evaluation tests have revealed in a dependable manner the actual performance of the individual laboratories. Approximately 90 percent of the laboratories which have been approved seem to be giving creditable serological service to the communities which they serve.

Eight hundred and thirty-two complete antirabic treatments have been distributed during the past year, an increase of some 35 percent. This increase is explainable by the increased prevalence of rabies. It is natural to expect, says Dr. Hamilton, that there will be an increase in rabid animals for some three or four years, since the epidemic cycle of rabies in North Carolina has an interval of about ten or eleven years, the anticipated peak coming in 1945 or 1946.

It is encouraging to recount the popularity of our Improved Pertussis Vaccine; 40 percent more was distributed during the current year than in 1940-41. The fact that most of it went into the same communities and to the same physicians ordering it last year is evidence that it is effective in controlling whooping cough.

The amount of diphtheria toxoid distributed during the past year is considerably less than for 1940-41 and the amount of diphtheria antitoxin requested has been increased proportionately. We have noted from time to time that whenever diphtheria immunization decreases the demands for diphtheria antitoxin increases. So far as the public is concerned they must use diphtheria toxoid or diphtheria antitoxin. If we were to disregard such humanitarian values as health contrasted with disease, pain and death, and look at our diphtheria problem only as a cold-blooded economic question involving dollars and cents, it is cheaper to give diphtheria toxoid than it is to give diphtheria antitoxin. Our experience has been that if we do not give toxoid, we must give antitoxin.

The nutrition laboratory has been installed and equipped. It is now ready for service. It should be most helpful in the study of nutrition problems of North Carolina. We predict that in next year's report we can include some definite accomplishments by the group of workers that will staff this unit.

Division of Vital Statistics—Dr. R. T. STIMPSON, Director.

There has been such a demand through industry and selectees for birth certificates that this division has been strained to the limit to meet the requests. In addition to the regular eighty to eighty-three thousand birth certificates issued each year, the demand for delayed birth certificates has amounted to about four hundred per day, each applicant insisting that his or her job depended upon securing the birth certificate immediately. It doesn't take a vivid imagination to realize what confusion this brings to the public as well as those in the division. We have placed 14 additional clerical workers in the

department in an effort to keep our books balanced daily, so please advise those with whom you come in contact to be patient.

It is gratifying to note that the 1941 death rate from all causes was the lowest ever recorded, the rate being 8.9 per 1,000 population in comparison with a rate of 9.0 for 1940.

There were 85,366 births reported during 1941, which outnumbered the 32,154 deaths recorded by 53,212. Among the causes for this reduction in deaths, I refer you to the detailed report.

Division of Sanitary Engineering—MR. WARREN H. BOOKER, Director.

The Division of Sanitary Engineering has taken advantage of every opportunity during the past year to promote sanitation and to improve health conditions throughout the entire State. This division has completed 34 water and sewer projects in the past year. Several complete new water and sewerage systems have been constructed and placed in operation which brings the roll of municipalities having public water supplies to a grand total of 322.

Because of the rapid expansion and establishment of military posts in the State, the activities in connection with milk sanitation have been greatly enlarged. The State Board of Health is coöperating closely with the Army and Navy in the certification of milk supplies to be used on Army reservations. It is interesting to note just here that there has been introduced in North Carolina a mobile milk laboratory, in charge of three technicians, assigned to North Carolina by the Public Health Service. This service has proven to be very effective and is well worth its "weight in gold."

For the past year the malaria control *drainage* program has been con-

tinued in seven counties, a total of 11 projects have been operated. One of these projects may embrace anywhere from one to 25 individual projects.

A maximum of 1,432 men, eight dredges, and 29 trucks were worked on malaria control drainage projects, and 103.1 miles of ditches and canals were dug. 4,168 acres of swamps were drained, 801 acres of right-of-way were cleared and 34 acres of swamps and ponds filled.

During the calendar year of 1941 there was spent through the WPA on the malaria control drainage program \$233,210.85; spent by sponsors, \$145,727.73, and \$7,320.70 spent by the North Carolina State Board of Health, making a total of \$386,259.28.

Division of Oral Hygiene—DR. ERNEST A. BRANCH, Director.

The Division of Oral Hygiene has been active during the school year now closing and more than 175,000 school children have had the privilege of having the dentists on our staff visit them in their classrooms and teach them the importance of having clean, healthy mouths and the things that they should do in order to have good teeth. Those receiving the dental corrections by our school dentists are the underprivileged children, who otherwise would have had to go without. Others were referred to their family dentists who are financially able to take care of their needs. We have 32 dentists on our staff and there is a greater demand for the work than we are able to supply.

Division of Industrial Hygiene (Coöperating with the North Carolina Industrial Commission) — DR. T. F. VESTAL, Director.

Industrial hygiene, our second front, has taken on increased momentum since the war began. The work being done among our various industries within the

State has attracted attention throughout the country. We have had many visitors interested in industrial hygiene during the year for the purpose of getting a close-up inspection and investigation of our procedures. It is a progressive and advantageous activity resulting in effective measures for the physical improvement of the plants and for detection and preservation of the employees. This disease-finding program is of immense benefit to the medical profession as all cases are referred to their private physician for attention.

Two hundred and thirty-eight visits have been made to mines, quarries, mills, and miscellaneous establishments during the year, and many hazardous conditions have been removed or improved.

Physical examinations of employees includes reexaminations and new examinations. The total examinations made during the year were 2,668; 2,639 serologic tests for syphilis were taken—positive, 5.3 percent. Industry showing the highest percent of positive Wassermanns are those employing a goodly number of the Negro race. The percentage of positives vary from 0 to 13.6.

Publicity: During the past year the Senior Publicity Specialist has furnished news releases regularly. Since May, 1941, clippings have been added to the State Board of Health's scrapbook covering 164 pages. The period covered includes publicity on the defense activities which the Board of Health has carried on and in which this department has coöperated. In addition to the work in connection with news releases, we have given approximately 50 broadcasts over station WPTF in Raleigh.

In closing, I cannot refrain from expressing publicly the deep and untiring interest the staff has shown in their work and manifested devotion to their duty.

Departmental Reports

Division of Preventive Medicine—Dr. G. M. Cooper, Director.

Work in this division for the current year which could be properly emphasized may be classified as an extension of the program and as new work. New work is the contribution of the \$3,000-a-year item to the School of Public Health Nursing in the employment of Miss Blee by this division and who has been assigned to teaching activities in the school at Chapel Hill. The arrangement, so far as we know, has been satisfactory. Influence on the student nurses should be felt in due time.

On the last check-up maternity and infancy clinic activities have been extended to cover 72 counties, and 291 separate clinics are being held. About 200 practicing physicians are coöperating in the conduct of these examinations.

The most important activity, however, is the success of the postgraduate work carried on during the year at Duke Hospital and Medical School and directed by Doctors Makepeace and Lawson, who also have taught in the Medical School and Public Health School at Chapel Hill, as well as the Nurses School. Both of them have done considerable work in the field in their spare time. Up to the first of April, 94 white physicians and 16 Negro physicians have attended the five-day courses in obstetrics and pediatrics at Duke. Doctors Davison and Carter of the pediatrics and obstetrics departments there have coöperated in every way possible. Nearly every physician who attended the course has expressed his satisfaction at the quality of instruction offered as well as the general helpfulness from the Duke faculty and the student body. Rooms in the dormitory and meals at the doctors' dining room have been provided free of charge for all these phy-

sicians. They have come from practically every general section of the State.

Crippled Children's Service: This report, marking the sixth consecutive year of operation of a coördinated service for crippled children under plans approved by the U. S. Children's Bureau, finds our country at war and defending that government which dares adopt measures for the broad welfare of all the people—which makes this program possible. Let it be recorded here that crippledom is finding a vital place in our total war effort and that in the area of productive defense and war prosecution the disabled is one of three major groups of people—the women, the old, and the disabled—upon whom our production must draw for labor to replace the soldiers who have been called from the ordinary productive pursuits of factory, field and trade. Many of the crippled children whom we have served and benefited in these six years are more disposed to assume positions of importance in our national war effort by reason of the strength they have gained in restored physical, moral and spiritual qualities derived from rehabilitation made possible through this program.

The continuing goals of the Crippled Children's Department are: (1) to locate crippled children; (2) to register these under proper medical classification, and (3) to provide treatment designed to reclaim physical ability so far as possible.

Locating Service: At the close of the year 1941, there were 18,924 cripples on the State register representing an increase of seven percent over the previous year.

Diagnostic Services: The number of clinics for medical diagnosis is unchanged—22 such centers being available for the examination and diagno-

tic classification of indigent persons in need of orthopedic examination or consultation. Sessions are conducted with monthly or less frequency at each clinic center which centers are in reach of all sections of the State. There were 314 sessions conducted during the year, at which 11,630 examinations were carried out. These examinations represented 4,411 first admissions of children within the period and 7,219 return visits of children. Twelve qualified orthopedic surgeons participated in these services, aided by workers on State and local levels representing public health and public social work services. The diagnostic services described are available to all ages of orthopedic cripples. There were 1,471 adults admitted for examination.

Treatment Services: Indicated treatment has been provided for indigent children through the following facilities: (1) clinics, where preoperative and postoperative medical attention is given by physicians and associates in the nursing and physical therapy techniques. Much preventive work is directed at these centers and increased emphasis is being given to this aspect of the total problem. A large amount of corrective and supportive cast work has been performed and numerous minor deformities corrected at clinic centers without the involvement of institutional care and expense. (2) The State Orthopedic Hospital provides care limited to the maximum age level of 16 years and to a capacity of 160 beds, for white and Negroes. (3) There are 20 selected general hospitals with an average capacity of 125 orthopedic beds. (4) There is one approved convalescent home which is operated by a private nonprofit corporation and which has a capacity of 20 beds. (5) A boarding home program supportive of medical measures and care, of which one is approved for the care of four children,

functions to provide care. (6) There is supervision of care and treatment in the child's own home under the direction of the physician with the aid of workers on the State level, especially trained in the area of orthopedics, and local public health nurses coöperating. The clinics provide for much of the need for postoperative surgical care and treatment following discharge from the hospital and through the clinic persistent oversight of corrections is maintained in many instances for many years following treatment.

On January 1, 1941, there were 181 children under care in hospitals and during the period 1,439 others were admitted, for a total of 1,620 children for whom care was provided in hospitals during the year. This approximates the number provided with hospital care the previous year. Of this total 39 percent were admitted to the State Orthopedic Hospital, and 61 percent were provided for in selected general hospitals. Of the total of 1,620 children under care during the year, 1,421 were treated and discharged, and 199 remained under treatment at the close of the year. Hospital care represented 78,692 bed days of which 26 percent were provided through general hospitals and 74 percent through the State Orthopedic Hospital. Treatment of children in hospitals (1,600 in round numbers), compared to treatment on clinic admission, indicates that approximately 14 percent of the children admitted to clinics required treatment of a nature to indicate hospital care; whereas, 86 percent were treated in the clinics and in their homes under the direction of the clinic physician and supervision of associate workers.

Field Services: During the year a specialized nursing consultant has been engaged to promote education among the nursing personnel on the local level. It is our hope to improve the

service in respect to early detection and prevention of crippling affections. This was particularly applied to the increased case load due to a slight increase in the incidence of poliomyelitis in the State during 1941.

Aside from the supervisory value of the clinics the State agency conducts a follow-up service through two levels of workers—especially trained workers on the State level and supervised local public health nurses. From the State level supervisory services were rendered to 2,330 children admitted to such services for the first time during the year and carried out 9,347 field and office visits in furtherance of such supervision.

Reviewing the program of the State agency in providing services during the period covered by this report, it is concluded that crippled children's services maintained a satisfactory progress and that needs of crippled children are being met more fully though there was a pronounced increase in the numbers admitted to the register. It should not be concluded that all of the divers needs of crippled children are being met. There are large numbers for whom there are not adequate resources. It is our goal to persist in seeking more adequate resources and improvement in the services and facilities which have limitations as to adequacy. Again, we must point out that progress in this field of endeavor, now an accepted responsibility of government, will be in ratio to the support which all the people give to those interested and active in this type of service.

*Division of County Health Work—DR.
R. E. Fox, Director.*

On July 1, 1941, full-time health service was organized in Carteret County, and on March 17, 1942, Iredell County established a full-time health unit. With the inauguration of these

health services, full-time health departments are now operative in 83 of the 100 counties in North Carolina and full-time health service has been maintained in the six city health departments as well. To this date, there are 66 full-time local health departments in North Carolina, 46 of which are county health units, 14 district health departments, and six city health departments. Health service is provided in 37 counties by the 14 district health departments, the size of these districts varying from two to five counties for each department.

There are employed at the present time in the 83 county and five city health departments (exception, Winston-Salem), a total of 668 full-time workers. Of this number, 65 are health officers, ten are assistant health officers, 11 are epidemiologists, and six are dentists. There are 17 supervisory nurses, two assistant supervisory nurses, and 285 staff nurses (or a total of 304 public health nurses). Five sanitary engineers are employed, six full-time veterinarians, 33 men are classified as sanitarians, 69 as sanitary officers, and 10 as follow-up workers (or a total of 123 sanitation personnel). Other personnel consists of 19 laboratory technicians and 130 clerical workers. The departments not employing full-time dentists have been provided with oral hygiene programs by the Division of Oral Hygiene of the North Carolina State Board of Health totaling thirteen hundred and fifty (1,350) weeks of dental service.

Since July 1, 1941, there have been trained or are now in training: five health officers, 55 public health nurses, 13 sanitarians, and two laboratory technicians, or a total of 75 trainees. The training of these persons has been made possible through funds provided from Social Security, Reynolds Foundation, or Federal Venereal Disease

Funds, and Maternity and Child Health (Children's Bureau). This personnel has been trained in the School of Public Health at the University of North Carolina, Columbia University, University of St. Louis, George Peabody College, College of William and Mary, Medical College of Virginia, and University of Southern California. All new field personnel have been trained in the field training centers in the Orange-Person Chatham District Health Department and the Durham City-County Health Department and, in addition to these, the Forsyth County Health Department, the Wake County Health Department, and the Greensboro City Health Department have been used for field training of nursing personnel.

On July 1, 1941, Miss Lillian Bayley, formerly supervisory nurse for the city of Asheville in Buncombe County, was added as Assistant Consultant Nurse, thereby expanding our Consultant Nursing Staff to four nurses and

affording more effective consultant service to the nurses in the local health departments.

Dr. J. Roy Hege was borrowed from the Forsyth-Stokes-Yadkin-Davie District Health Department to become director of activities in war defense areas. He has devoted all of his time to this work since May, 1941. He has assigned additional personnel to the following health departments: Cumberland County, New Hanover County, Onslow - Pender District, Carteret County, Craven County, Granville County, Durham County, Union County, Robeson County, Cherokee-Clay-Graham District, and Buncombe County and Wayne County. This personnel has been paid out of an emergency health budget and through assignment of personnel by the United States Public Health Service. The following constitute the number of personnel employed as of April 20, 1942, in these war defense areas:

County	Physicians	Nurses	Sanitarians	Technicians	Clerks
Cumberland	1*	4 1*	2	1	1
New Hanover	1*	1 1*	2	---	---
Onslow .....	...	1 1*	3	---	---
Pender	1	1	---	---	---
Carteret .....	...	...	---	---	---
Craven	1*	1 1*	1 1* (Eng.)	1	---
Granville .....	...	3 1*	4	---	---
Durham	1*	...	1	---	---
Union .....	...	1*	2	---	---
Robeson .....	...	...	1	---	---
Graham .....	...	...	1	---	---
Wayne .....	...	...	1	---	---
Buncombe .....	...	...	1	---	---
State Board of Health.....	1 1*	1 (Supv.)	1 (Eng.)	---	1

During the maneuvers held in North Carolina in October and November, 1941, Doctor Hege was in charge of public health activities in the eight counties of North Carolina embraced in the maneuver area and personnel from this emergency organization was assigned to supplement existing personnel in the counties on medical, nursing, and sanitation problems. A district headquarters was set up at Rockingham, North Carolina, for the duration of the maneuver period. These activities were carried on in Scotland, Hoke, Richmond, Moore, Montgomery, Anson, Union, and Stanly counties. We are glad to report that no outbreak of any communicable disease arose which could be attributed to the influx of soldiers or visitors.

A consolidation of the field visits made by members of the staff of the Division of County Health Work, rendering consultative and advisory services in the interest of health work during the period January 1, 1941 to December 31, 1941, reveals the following: 76 visits made by the Director to counties having full-time health service; 95 visits made by the Consultant in Sanitary Engineering; 347 visits made by the Consultants in Public Health Nursing, and 73 visits made by our Field Representative, giving a total of 591 visits made by the Director and Consultants in the Division of County Health Work during the calendar year 1941.

Division of Epidemiology—Dr. J. C. Knox, Director.

During the year covered by this report the activities of this Division have continued to expand. The Central Tabulating Unit, operating under this Division, has furnished to the U. S. Public Health Service certain periodic reports of a tabular nature, and to this Division a weekly statistical morbidity report and the material from which the annual morbidity report from this Division is compiled. For this report year the counties organized under the Central Tabulating Unit reported 12,925 new, untreated cases of syphilis while private physicians, hospitals and other institutions reported 2,547 new, untreated cases of syphilis. In this period an average of 24,172 patients per month attended the public clinics for treatment or clinical aid for syphilis. The clinics administered 803,329 treatments for syphilis. Counties organized under the Central Tabulating Unit reported 7,369 new, untreated cases of gonorrhea. Private physicians, hospitals and other institutions reported 1,629 new, untreated cases of gonorrhea.

The *Malaria Investigation and Control Unit* of the Division of Epidemiology continued to conduct county-wide, detailed surveys in counties known to be malarious. On these surveys blood slides were taken from all children in the first six grades. The home of each child with a positive blood slide is located with a symbol on a county map. In the focal areas thus established detailed maps showing all homes, bodies of water and other pertinent data are prepared. During this report year 11,433 blood slides were taken, 12,127 slides were examined, and 13,000 slides were cleaned. Of the slides taken about 1,000 were taken in surveys around ponds where malaria is known to be present.

*Assigned by U. S. Public Health Service.

Educational work has been carried on by talks in schools and before civic organizations, by published articles, by exhibits at county fairs, moving pictures, and the distribution of literature.

The hydro-electric companies conducting malaria control programs are working under the supervision of the Malaria Investigation and Control Unit. An effort is made to visit each of these lakes several times a year.

Malaria Program in Defense Areas: Realizing that in previous wars many soldiers died of mosquito-borne disease, or were rendered unfit for combat, the Army, Navy, U. S. Public Health Service, and North Carolina State Board of Health decided to establish control operations in and adjacent to cantonment areas, as well as in towns frequented by large numbers of troops. The Malaria Investigation and Control Unit prepared maps of all such areas, prepared control plans, and assisted military and naval authorities in formulating and supervising programs which were carried out on the reservations. In extra-cantonment areas the malaria control program was conducted with funds provided by the U. S. Public Health Service and administered by the North Carolina State Board of Health. An entomologist operating directly under the malaria control engineer was added to the staff to coordinate and supervise the field work, make weekly inspections of larvicide work, and perform any other activity necessary to the maintenance of the program. The extra-cantonment program employed the following personnel and equipment: 1 entomologist, 5 supervisors, 10 foremen, 80 laborers, 13 trucks, the necessary spray cans and small tools. In all areas close coöperation was maintained with the local health departments and the military and naval officials. A greatly en-

larged malaria control program is now being organized for the approaching season. In addition to the regular technical personnel, five engineers and one entomologist, paid by the Public Health Service, have been added to the staff. Funds have been allocated to the Public Health Service for the necessary supervising personnel, laborers, equipment and materials.

Venereal Disease Control: At the beginning of this report year Dr. Frank S. Fellows, Surgeon, USPHS, on assignment to this division as venereal disease consultant, was transferred to another state. His place was filled by Dr. Robert D. Wright, P. A. Surgeon, USPHS. Dr. R. J. Sykes remained as the other consultant in this division.

Two new counties were organized with full-time health departments maintaining venereal disease clinics. In addition, a venereologist was placed in charge of the reorganized program in Cumberland County. Epidemiologists were placed in charge of the program in New Hanover and Craven counties. Programs in all the counties were strengthened by the addition of new personnel. This included 13 clinic nurses, 44 clerks, 75 lay case-finding, case-holding workers. This latter group were employed principally to insure treatment of infected selectees. In addition, public health nurses were added to the staffs of counties in defense areas.

Other field personnel dealing with venereal disease include Dr. Lucy Morgan, health education specialist, and two assistants who have been working in defense areas.

During the report year clinics treating venereal diseases totaled 306 in which a total of 404 clinic sessions are held weekly. This made clinic services available to approximately 92 percent of the State population. In this period

12,925 new cases of untreated syphilis were admitted to the clinics. Treatments for syphilis totaled \$03,329.

In this period effort has been directed especially at improvement in the quality of the case load of clinics rather than the quantity of the case load. In order to more adequately prevent the spread of syphilis, increasing attention has been directed toward the discovery and treatment of the early infectious case and the examination of his contacts.

A large portion of the venereal disease control effort during this period was expended in the vicinity of military areas. At Fayetteville the venereal disease clinic was completely reorganized with a full-time venereologist placed in charge. An interviewing service was added to get contacts examined and treated. A special feature of this service was the introduction at Fort Bragg of interviewing of soldiers by public health nurses. This has proved an outstanding assistance.

At Wilmington the clinic was placed under a full-time epidemiologist who interviews soldiers at Camp Davis.

At New Bern the program has been placed in charge of a full-time epidemiologist. Programs in other military areas have been strengthened by the addition of nurses, clerks and case workers.

During the months of October and November, 1941, the First Army held maneuvers in eight counties in North Carolina and eight counties in South Carolina. In general, the maneuver area extended from the Fort Bragg reservation in North Carolina to the Fort Jackson reservation in South Carolina.

In preparation for the Army maneuvers in North Carolina, the Governor called a meeting of all agencies involved on July 30, 1941. A meeting

was also held in the center of the maneuver area for all local law enforcement officials. At this meeting Professor Albert Coates of the Institute of Government instructed the local law enforcement officials as to their part in the venereal disease control work. The State Board of Health called in all follow-up workers in this program and gave them a short, intensive course in venereal disease control, held at the University of North Carolina at Chapel Hill. After this short course one of these men was assigned to a county in the maneuver area. The duties of these men were to work with local law enforcement officials and local health departments in suppressing prostitution and to aid in the venereal disease control program. Before the maneuvers began, but after military officials had arrived in the area, a joint meeting of maneuver area health officials and military officials was held in order to develop plans for immediate reporting of all contacts of infected military personnel.

During this report period the gonorrhea control program has been strengthened by the institution of culture techniques or provision for them at Greensboro, Charlotte, New Bern, Fayetteville, Winston-Salem, Asheville and Wilmington. Sulfathiazole has been provided for treatment in all clinics, but not to private physicians. The anti-syphilitic drugs are provided without cost, both to clinics and physicians.

An important addition to the equipment for this work has been the purchase of 45 sound-motion picture projectors and a circulating film library for the promotion of health education for venereal disease control through local health organizations.

Physician-education in venereal disease control was extensively promoted

during the latter part of this report period by the holding of eight regional institutes at which Dr. Percy S. Pelouze, outstanding authority on gonorrhcea, was the principal speaker. A new syphilis teaching film in natural color has been a valuable aid in physician-education.

A training course was held in Raleigh on April 15-16-17, 1942, for the new case-finding, case-holding personnel made available to the local health departments by supplemental appropriation for venereal disease control from the U. S. Public Health Service.

Endemic Typhus Fever Control: On August 15, 1941, Mr. E. L. Hinton became consultant engineer in this Unit. Prior to August, 1941, the Unit work consisted chiefly of poisoning campaigns, using kiln-dried red squill of known toxicity. As this is a temporary measure, the Unit recommends a modified form of rat-proofing known as vent-stoppage. With the exception of five towns, the Unit has used vent-stoppage exclusively in their work. These five towns are: Snow Hill, Wilson, Elm City, Stantonburg, and Sylva. Rat poisoning campaigns in these towns have cost \$840. Since these campaigns two of the towns, Snow Hill and Wilson, have begun a vent-stoppage program. There were other towns in North Carolina conducting similar campaigns sponsored by the U. S. Fish and Wildlife Service, in which we did not participate.

Prior to August, 1941, one town in North Carolina, Clinton, had been surveyed and labor and materials computed. Since then the consultant engineer with this Unit has presented the project to the town commissioners, who have approved the project and agreed to follow our recommendations.

A brief summary of eight other towns surveyed and computed for a program follows: *Laurinburg*, 112 units surveyed. Total cost for labor and material, \$614.34. *Oxford*, 95 units surveyed. Total cost for labor and material, \$792.29. *Snow Hill*, 28 units surveyed. Total cost for labor and materials, \$245.58. *Hookerton*, 12 units surveyed. Total cost for labor and materials, \$193.28. *Warsaw*, 46 units surveyed. Total cost for labor and materials, \$353.68. *Winston-Salem* (one city block surveyed), 37 units surveyed. Total cost for labor and material, \$371.28. *Greenville*, 220 units surveyed. Total cost for labor and material, \$1,492.67. *Wilson* (7 city blocks surveyed), 153 units surveyed. Total cost for labor and materials, \$1,000.

Total number of units surveyed, 703.

Total cost labor and material, \$5,063.12.

Of these towns only four have actually begun the work outlined in our surveys. These are: Laurinburg, Snow Hill, Oxford, and Wilson. In each town the carpenters and laborers were trained personally by the consultant engineer of this Unit. During the construction of vent-stoppage he returns at intervals to check the workmen to see that the work is being carried on properly. At the present time Wadesboro is conducting a survey. Also at this time Rocky Mount and Bladenboro have made application for a survey.

During this report period the consultant engineer has handled the correspondence and reports required of this Unit as well as the field service and, in addition, spent one week in Savannah, Georgia, observing typhus control work carried on there by the U. S. Public Health Service. The consultant engineer has appeared before meetings of civic organizations in vari-

ous towns, presenting talks on typhus control and motion picture films on the subject.

In addition to the special unit activities above described, a considerable volume of correspondence, reports, tabulation, and compilation of data, not relating to any of these special activities yet in the field of communicable disease control, was carried on by this Division. An example of this is the rapidly increasing service required by persons in this and other states requiring information and special forms relating to the North Carolina premarital examination law. This Division during this report year has designed and had printed, to be added to its other premarital examination forms, special military blanks which permit men in the military service to have the blood test and the general physical examination made by a member of the medical corps staff at their military base. This procedure has been approved by the Attorney-General of North Carolina after a review of the Medical Practice Act in this State, under which physicians in military service hold automatic licensure in North Carolina. The presence of several military posts in this State has added greatly to the information service and necessity for forms to be furnished under this law.

Division of Laboratory of Hygiene—

DR. JOHN H. HAMILTON, *Director.*

For the State Laboratory of Hygiene during the past several years we have been reporting progress on the building of a physical plant. This year there has been no building with brick and mortar but there has been a considerable amount of work of a constructive nature. The newness of our buildings required a considerable amount of change in the procedures in order that we might become adjusted to the new conditions. Improvements in administrative as well as laboratory methods

were called for by the new opportunities afforded us. Some of these were recorded in the last report to this session.

A new system of records has been installed for use in connection with the examination of specimens from patients. At first there was a little confusion in connection with the new identification forms but these are now markedly improved. A punch card will be made for each specimen thus making available much valuable statistical data. These punch cards will be used also in the making of a permanent index of laboratory reports. We can assure the medical profession, however, that there will be no change in the policy of regarding the laboratory report of examination of a specimen from a patient as confidential information to which only the physician sending the specimen is entitled.

On the Laboratory Farm we can report definite progress. The small animal breeding colonies will have increased by the end of June to the point where they can supply the laboratory with its usual requirement for guinea pigs, rabbits and mice.

In connection with the routine activities of the Laboratory there has been no spectacular performance such as occurred in 1940 when it was necessary for the Laboratory to supply large quantities of typhoid vaccine and other biologics to the flood areas of Northeastern North Carolina, or to examine over 100,000 specimens of blood taken from draft registrants. Despite the lack of any unusual demands upon the Laboratory the volume of work performed is essentially the same as it was during the previous year. This has been accomplished without the employment of extra personnel in contrast with the experience of the previous year when twenty additional workers were needed for a period of six weeks.

During the past twelve months 593,322 examinations have been made in the Laboratory. Of these 419,240 were serological tests for syphilis on specimens taken from our civilian population and \$3,694 were similar examinations on specimens received from Selective Service Boards.

The Laboratory has continued to participate in the evaluation studies for serological tests for syphilis conducted by the Advisory Committee of the United States Public Health Service. In 1941 our Kline Test had a Sensitivity rating of 80.0 percent. The Control Laboratory—Kline—76.0 percent. Both tests had a Specificity rating of 100 percent. Our Wassermann, the Eagle Complement Fixation Test, had a Sensitivity rating of 68.9 percent. Eagle's Laboratory, control for this test, was 80.7 percent. Our Specificity rating was 100 percent; the Control, 98.8 percent.

We have continued to conduct Evaluation Tests for the laboratories within the State which have been approved for the making of serological tests for syphilis under the Marriage Law. Each month at least one series of not less than ten specimens is sent to each laboratory either on the approved list or applying for approval. The specimens are made up from pooled definitely positive and definitely negative sera. From these positive and negative pools we can secure specimens giving different degrees of reactions by diluting positive serum with negative serum. Although we had some difficulty during the early part of 1941 in distributing satisfactory specimens, the technical difficulties that were responsible for those unsatisfactory specimens seem to have been solved. Since then the Evaluation Tests have revealed in a dependable manner the actual performance of the individual laboratories. Approx-

mately 90 percent of the laboratories which have been approved seem to be giving creditable serological service to the communities which they serve.

In the examination of animal heads for rabies we received during the year 1,067. Of these 392 dog heads showed evidence of rabies. There were 11 cats, 15 cows, 14 foxes, one squirrel, and one goat with Negri Bodies in brain cells. We are now making mouse inoculation of brain material from all animals suspected of rabies in which we are unable to find typical Negri Bodies on microscopic examination. Up to the present time we are pleased with this procedure.

Eight hundred and thirty-two complete antirabic treatments have been distributed during the past year, an increase of some 35 percent. This increase is explainable by the increased prevalence of rabies. It is natural to expect that there will be an increase in rabid animals for some three or four years, since the epidemic cycle of rabies in North Carolina has an interval of about 10 or 11 years, the anticipated peak coming in 1945 or 1946.

For intestinal parasites we have adopted a simplified concentration method which has been helpful in determining slight infestations. This method has been used on the specimens from young people who are part of the National Youth Administration Program. For these specimens we have also looked for Ameba Cysts, since they represent a cross section of the youth of the State. It has been gratifying to find only a small percentage of them in which ameba could be found.

We have developed new blood culture outfit, one of which is especially designed for use in connection with patients suspected of undulant fever.

The brucella grow well in the media contained in this outfit. Their popularity will probably increase.

Seven thousand, one hundred and twenty-six samples of water were examined during the past year as contrasted with 7,129 in the previous year.

When compared with the previous year there has been a decrease in the amount of typhoid vaccine distributed. This decrease is largely due to the volume of typhoid vaccine used in flood relief activities in the previous year.

There has been an increase in the amount of smallpox vaccine distributed, the number of immunizing doses for the current year being 277,773.

It is encouraging to recount the increase in popularity of our Improved Pertussis Vaccine; 40 percent more was distributed during the current year than in 1940-41. The fact that most of it went into the same communities and to the same physicians ordering it last year is evidence that it is effective in controlling whooping cough.

The amount of Diphtheria Toxoid distributed during the past year is considerably less than for 1940-41, and the amount of Diphtheria Antitoxin requested has been increased proportionately. We have noted from time to time that whenever diphtheria immunization decreases the demands for Diphtheria Antitoxin increases. So far as the public is concerned they must use Diphtheria Toxoid or Diphtheria Antitoxin. If we were to disregard such humanitarian values as health contrasted with disease, pain and death, and look at our diphtheria problem only as a cold-blooded economic question involving dollars and cents, it is much cheaper to give Diphtheria Toxoid than it is to give Diphtheria Antitoxin. Our experience has been that if we do not give Toxoid we must give Antitoxin.

Notwithstanding the fact that the Division of Epidemiology has had Neoarsphenamine available without cost to the medical profession, the Laboratory has continued to sell a sizeable quantity of this drug, the equivalent of 42,000—0.6 gram ampules being sold during the past twelve months.

A Nutrition Laboratory has been installed and equipped. It is now ready for service. It should be most helpful in the study of nutrition problems of North Carolina. We predict that in next year's report we can include some definite accomplishments by the group of workers that will staff this unit.

We have continued our policy of training laboratory personnel. Each year since 1936 two staff members of the Laboratory have been given scholarships and have taken postgraduate training. This year we have one staff member at the University of North Carolina and one at the University of Southern California.

Only slight increases in salaries of laboratory personnel have been made during the past year. These have not been sufficient to keep up with the increased cost in living, so that from all practical purposes our laboratory workers are receiving less than they did a year ago. It would be most heartening if the salaries of laboratory workers could be raised to the point where they were in keeping with the training and experience required and in the spirit of devotion to serve which they have manifested.

During the past year there has been a marked increase in the use of the auditorium. A wide variety of types of meetings and purposes of meetings would be shown if we made a statistical study of its use. The library room in the Laboratory will soon be made ready for use. It is planned that this room will house the library of the State Board of Health, including the

Chas. O'Hagan Laughinghouse library. If it were possible to secure a trained librarian, the value of this library would be greatly enhanced.

With a future so uncertain as that which confronts the world today, it would seem that the time is inopportune for the making of long-term plans and the establishment of objectives that might be accomplished a year or a few years from now. The Laboratory is, therefore, working on a program based on day-to-day needs, doing that which seems to be useful or helpful in connection with the promotion of the war effort. The staff has repeatedly manifested its devotion to duty and its willingness to serve with its hands, its money or in performing active military duty.

Division of Vital Statistics—DR. R. T. STIMPSON, Director.

The mortality record for 1941 compared favorably with the record of previous years. The death rate from all causes was the lowest ever recorded. There were more births recorded than for any year since 1924.

The 85,366 births reported during 1941 outnumbered the 32,154 deaths recorded by 53,212. There were 40 fewer deaths than for 1940, fewer than for any year since 1933. The death rate was 8.9 per 1,000 population in comparison with a rate of 9.0 for 1940.

By a more detailed study of the tabulation of specific causes of death it is found that there are decreases in the number of deaths from many infectious diseases. Deaths from such debilitating causes as heart diseases, nephritis, and cancer either increased or showed no significant change.

Among those conditions accounting for fewer deaths in 1941 than in 1940 was typhoid fever. There were 32 deaths from this disease last year com-

pared to 39 in 1940 and 46 in 1939. This is not a large decrease in numbers, but when considered in relation to the total number of deaths it represents more than a 15 percent decrease and is a continuation of the downward trend toward the goal of complete eradication. There were 60 fewer deaths from pulmonary tuberculosis. There were no deaths from smallpox; 139 deaths from pellagra compared to 169 in 1940; 33 malaria deaths compared to 66 the previous year, and 354 puerperal deaths compared to 438 for 1940.

The fewer number of deaths charged to pneumonia was a continuation of the downward trend begun in 1938. Last year there were 172 less pneumonia fatalities than the year before, 234 fewer than in 1939, and 840 fewer than in 1938.

The mortality from diphtheria showed a gratifying decrease over 1940. There were 89 deaths from this disease in 1941, with a rate of 2.5 as compared with 119 deaths and a rate of 3.3 in 1940.

In addition to the increased number of statistical tabulations and analyses made by the Division of Vital Statistics, the number of requests for certified copies of certificates and verifications of age, parentage, and place of birth, on the increase for several years, multiplied many-fold during 1941, and took an additional jump following our entry into the war. The increased demand is due to the requirement of the Federal Government that persons employed in war industries submit evidence of citizenship. In most instances the proof required is a birth certificate. This has necessitated the employment of several additional clerks. Furthermore, the Division was fortunate in being able to secure WPA assistance to help fill the requests. A sufficient number of employees has

been secured to meet the present demand for certificates.

Division of Sanitary Engineering—MR. WARREN H. BOOKER, Director.

The Division of Sanitary Engineering has taken advantage of every opportunity during the past year to promote sanitation and to improve health conditions throughout the entire State. Because of existing world conditions and the need for laborers in the defense activities, virtually all projects formerly operated by the Works Projects Administration in the eastern part of North Carolina have been closed; however, this agency has coöperated to the fullest extent and has completed 34 water and sewer projects in the past year. Several complete new water and sewerage systems have been constructed and placed in operation by the WPA, which brings the roll of municipalities having public water supplies to a grand total of 322. At present there are 32 WPA water and sewer projects in operation. Several of the larger cities have made major improvements to existing facilities through private contract, including a 50 percent expansion of water treatment facilities at Roanoke Rapids, a complete new domestic sewage and industrial waste treatment plant and a 125 percent expansion of water treatment facilities at Rocky Mount. Through assistance from the Division of Sanitary Engineering, the corporate municipalities of Bonnie Doone and Holly Ridge have been created and a new sanitary district known as Spring Lake was formed. Water and sewer construction is under way at each of these places.

Since the passage of the Lanham Act, or Community Facilities Bill, sizeable grants and loans have been made to practically all municipalities that have suffered severe impact due to war

and defense activities. This list includes projects at Fayetteville, Bonnie Doone, Spring Lake, New Bern, Wilmington, Jacksonville, Holly Ridge, Swansboro, and others totaling over \$2,000,000, all of which is being utilized in the expansion and in the improvement of municipal water and sewerage systems.

With the increase of defense work, other municipalities in strategic areas are now eligible for assistance under the Lanham Act, and every effort is being made to get each city that is affected to take advantage of this program.

During the period from September 1, 1941, through December 15, 1941, nearly all of the engineers and sanitarians of this division spent the major portion of their time on special work in conjunction with the Army in the Carolina maneuvers area. Special attention was paid to milk and food supplies, restaurant sanitation, sewage disposal, and water supplies. As far as can be determined there were no cases of food poisoning or illness attributable to water or milk. This record speaks for itself.

Even though numerous calls for extra activities have been placed on the Division, the inspection service has been kept up to its previous high standard. During the period from April, 1941, through March, 1942, over 1,642 inspections of water and sewage facilities were made and nearly 100 sets of plans were reviewed by the engineers of the Division. The sanitarians have completed 5,001 inspections of hotels and cafes, and 1,376 meat markets and abattoirs. The bedding unit has made 4,475 inspections as a result of which 3,627 pieces of bedding were condemned and 28 dealers were prosecuted.

In addition to the foregoing, 53 FHA inspections were made during the year

and 429 FHA applications were reviewed and approved (November, 1941, through March, 1942).

In coöperation with the Department of Conservation and Development, over 1,300 inspections of shellfish areas, oyster shucking houses, and crabmeat packing plants were made.

During the past year the number of counties operating community sanitation projects, together with the number of units constructed, have gradually declined. This reduction was caused in many cases by the expansion of defense activities throughout the State, which reduced the number of WPA laborers available for work on community sanitation projects.

On July 1, 1941, the Public Health Service discontinued their financial aid for supervising Community Sanitation and the WPA also greatly curtailed their activities. Projects have been operated in only thirteen counties since July 1, 1941. There are now seven counties operating and all of these are located in the western part of the State. We have been unable to secure any WPA help for privy projects within the defense areas. The sanitation carried on in these areas has been promoted by the local health departments, through the use of private labor.

For the period covered in this report, a total of 4,219 privies have been constructed. Prior to July 1, 1941, there was an average of 590 men working on privy projects. Since July 1 there has been an average of only 110 men working on these projects.

With the curtailment of WPA activities and because of the reduction in funds from the Public Health Service for supervision, no effort has been made since July 1 to expand or promote community sanitation projects with relief labor, as it is believed that with our limited means and personnel more prog-

ress can be made through local health units promoting this activity with private labor.

In 1941 the Milk Sanitation Program of the State Health Department has been reorganized by assigning certain sanitarians to milk work exclusively and adding additional personnel from the Public Health Service, whereas in the past this work has been carried on as one of the regular functions of the district sanitarians of this Division.

Because of the rapid expansion and establishment of military posts in the State, the activities in connection with milk sanitation have been greatly enlarged. The State Board of Health is coöperating closely with the Army and Navy in the certification of milk supplies to be used on Army reservations. One additional public health engineer and one milk specialist have been assigned to the State by U. S. Public Health Service. These men devote their entire time to milk sanitation in the defense areas. We also have the services of a Mobile Milk Laboratory, in charge of three technicians, assigned to North Carolina by the Public Health Service. During October and November considerable time was consumed in connection with sanitation of milk supplies used during the first Army maneuvers held in this State.

The two regular sanitarians of the State Health Department assigned to milk sanitation and the part-time sanitary engineer supervising this program are devoting their time and efforts toward the improvement of methods used by dairies and plants throughout the State, and are working with local health departments and city enforcement agents in promoting better enforcement of local milk ordinances. During the year there have been made 1,331 dairy inspections and 218 inspections of pasteurization plants. The

Mobile Milk Laboratory has worked in nine cities and the eight counties of the maneuvers area, making 3,151 analyses on 2,818 samples. The above analyses have been made since July, 1941, and have consisted of both bacteriological examinations and phosphatase tests. Special emphasis has been placed on co-operation with the dairy industry in providing an adequate and safe supply of milk for Army camps. The Mobile Laboratory has also been of assistance in finding and correcting several major defects of operation found in many pasteurization plants in the State. Excellent coöperation is being received from the dairy industry, the State Department of Agriculture, and others concerned directly or indirectly with the milk program in North Carolina.

For the past year the malaria control drainage program has been conducted in seven counties, and a total of 11 projects have been operated with the aid of the North Carolina Work Projects Administration. One of these projects may embrace anywhere from one to 25 individual projects.

For this period, a maximum of 1,432 men, 8 dredges, and 29 trucks were worked on malaria control drainage projects, and 103.1 miles of ditches and canals were dug. 4,168 acres of swamps were drained. 801 acres of right-of-way were cleared and 34 acres of swamps and ponds were filled.

The supervisory personnel on the malaria control drainage program consisted of one Assistant State Director and one District Supervisor. During the past twelve months the Assistant State Director has not been able to devote more than one-half of his time to this program. The balance of his time was employed on the extra cantonment larvicidal program in defense areas and in coöperating with Army and Navy officials on malaria control on their

reservations. A great deal of malaria control work has been done on Army and Marine property, which has not been included in this report since the work was paid from Army and Navy funds. The purpose of this report is to show the work accomplished with the aid of WPA funds.

The following figures show the amount of money spent on the malaria control drainage program during the calendar year of 1941. Figures are not yet available for the period covered by this report:

	Pet.
Spent by WPA.....	\$233,210.85
Spent by sponsors.....	145,727.73
Spent by N. C. State	
Board of Health.....	7,320.70

	\$386,259.28
	100

The money shown spent by the State Board of Health on the foregoing tabulation was for technical supervision.

Division of Oral Hygiene—DR. ERNEST BRANCH, Director.

The Division of Oral Hygiene believes in the old adage of training a child in the way he should go. This is evidenced by the fact that during the school year now closing more than 175,000 elementary school children will have had the privilege of having the dentists on our staff visit them in their classrooms and teach them the importance of having clean, healthy mouths and the things that they should do in order to have good teeth. It is an unusual privilege that the children enjoy, and it is recognized as such and appreciated by the teachers and principals of the schools as well as by the parents of the children.

All of these children, 175,000 strong, will also have had their mouths inspected by the school dentists, and those needing dental attention will

either have had the necessary dental corrections made by the school dentists or will have been referred to their family dentists. Those receiving the dental corrections by the school dentists are the underprivileged children who otherwise would have had to go without. Those who are referred to their family dentists are the children whose parents are financially able to take care of their needs.

There are thirty-two dentists on the staff of the Division of Oral Hygiene. We could use more as there is a greater demand for the work than we are able to supply, but good dentists who are suited to this work are hard to find and hard to keep.

The puppet show continues to be one of our chief attractions. It teaches mouth health effectively, and the good will it engenders for the Board of Health is valuable indeed.

Our handbook, "Teaching Mouth Health in North Carolina," is being used in the health education classes of the University of North Carolina and in all of the teacher training institutions of the State. It has proven to be so helpful to the teachers that we are now distributing the second edition.

We are continuing our mouth health education news releases to the school papers and our follow-up material for classroom use. In this way the message of the school dentists is kept before the children and is carried by them into their homes.

For a more comprehensive view of the activities of the Division of Oral Hygiene we refer you to the March issue of THE HEALTH BULLETIN.

Division of Industrial Hygiene—DR. T. F. VESTAL, Director.

Following the previously established custom, this annual report is

divided into two sections, engineering and medical, and covers the period above indicated.

Engineering: The engineering activities are summarized as follows:

Two hundred thirty-eight visits made to mines, quarries, mills, and miscellaneous establishments for the following purposes:

- 48 plants for atmospheric dust samples for particle counts.
- 150 plants for information or inspection.
- 34 plants to promote dust control.
- 1 plant to check an exhaust ventilation system.
- 3 textile mills re atmospheric condition.
- 1 scrap lead smelter re lead content of atmosphere.
- 1 military hospital re ventilation.
- 151 atmospheric samples of dust collected for particle counts.
- 30 (approximately) atmospheric samples of bacteria collected to evaluate atmospheric pollution.
- 9 relative humidity readings made to appraise merits of worker complaint.
- 11 atmospheric lead samples collected.
- 57 samples of minerals and mineral dusts examined petrographically for quartz content.
- 1 sample analyzed for particle size.
- 11 samples analyzed for lead content.
- 1 dermatological exhibit prepared and set up at the 12th annual State-wide Safety Conference.
- 1 Industrial Commission hearing attended for the presentation of testimony.

As a result of the above field work, the following plans, reports, and papers were prepared in the office:

- 17 industrial exhaust ventilation systems designed.
- 1 industrial locker room and exhaust facilities designed.
- 1 set stock plans for cyclone dust collectors prepared.
- 1 set stock plans for plant wash room designed.
- 2 sets of plans for industrial exhaust systems, submitted for approval, were examined.
- 1 set of plans for wet-type dust collector studied.
- 82 investigational plant reports prepared.
- 32 memorandum plant reports prepared.
- 16 miscellaneous reports — monthly, quarterly, State plan.
- 5 papers prepared for public presentation at organizational meetings.

In addition, the miscellaneous activities included (a) assisting the U. S. Public Health Service in making a motion picture on the protection of worker health in the present national emergency; (b) giving in-service experience to three public health trainees and two Rockefeller students from Turkey and Peru, respectively; (c) arranging the programs for the regional safety conference at Spruce Pine and a State-wide Safety Conference at Charlotte.

Medical: The medical activities for the most part have been condensed into the attached tables whose headings are self-explanatory. It will be noted that the various plants examined fall into one of sixteen different industries. Table 2 indicates the examinations made for the sixteen separate industries. The column headed "Reexaminations" indicates that these employees have all been previously examined by this Division, and this year's examinations indicated in this column are those

who have been recalled for routine re-examination. The column headed "New Examinations" indicates that these employees were examined by us for the first time. This same table also shows the number of blood Wassermanns taken in the various industries and further divides these into positive and negative reactions. These blood specimens were taken in the field at the time of the physical examination and forwarded to the State Laboratory of Hygiene where the tests were actually done by the Laboratory of Hygiene and the reports forwarded to us to be noted on the chart of the individual. It should be pointed out that the percentage of positive varies from 0 to 13.6. The industries showing the highest percentage of positive Wassermanns are those employing a goodly number of the Negro race. The average for the sixteen industries we feel is remarkably low and represents a fair cross-section of the industries examined, and when compared with Army reports of draftees, speaks well for the industry of the State.

Table 3 makes a comparison between this year's report and that of last year. In view of the fact that considerable time was spent this year in a change-over of our field unit from the old truck and trailer unit to the new bus unit now in use, this year's report compares favorably with that of last year. During the month of November no examinations were made due to the change-over process. A part of December was also consumed in this transfer of equipment and relatively few examinations were made during December. It will also be noted from this summary that the amount of compensation hearings almost doubled in the period covered by this report. This should not be taken as an indication that silicosis and asbestosis are on the increase, since a goodly portion of the

nineteen hearings in this year were carry-overs from previous years and are now being cleared off the records. This item of nineteen hearings is further broken down into fifteen hearings on silicosis and four asbestosis.

The nine visitors come from widely separated areas. Five of them were sent to us by the U. S. Public Health Service for varying periods of observation in field work, three of these being medical men and two visits from the Supervising Nurse in Industrial Hygiene. Another physician came from the Mexican Public Health Service. There was also one visit from a social worker from the New York Labor Department. Two engineers, one from Turkey and one from Peru, spent some time in observing field work.

During the year we have obtained from the Public Health Service on a lease-lend basis the services of a doctor for three months and of a chemical engineer for eight months. The Public Health Service has also provided us with the services of an X-ray technician for a period of approximately two months. As the year closes, an

additional physician and X-ray technician from the Public Health Service are with us, assisting in a research problem which has as its purpose a comparison of the 35 mm. miniature X-ray equipment with the conventional X-ray equipment in use. This unit has been tried out extensively elsewhere in the field of tuberculosis case finding, but the purpose of our present research is to discover if possible its value in the field of pneumoconiosis.

The Division has also been provided by the Public Health Service on a lease-lend basis a considerable amount of laboratory supplies and equipment. The largest single item of this equipment is the bus unit which at present houses and transports our traveling X-ray clinic and is propelled by a two and one-half ton International truck on which a special body was designed by us and built by a local car works. This unit is designed to house our present X-ray equipment and, in addition, space is provided for one of the miniature X-ray units and two examining rooms in the rear.

TABLE I

CHRONOLOGICAL ARRANGEMENT OF PHYSICAL EXAMINATIONS

May	338	November	.....	.....
June	217	December	.....	87
July	274	January	.....	117
August	387	February	.....	465
September	281	March	.....	228
October	109	April	.....	165
Total—2668				

TABLE II
ARRANGEMENT OF PHYSICAL EXAMINATIONS BY INDUSTRIES

	Re-Exams	New Exams	EXAMINATIONS		WASSERMANN'S		Percent Pos.
			Total	Negatives	Positives	Total	
1. Foundries and Molders.....	375	395	770	678	76	754	10.0
2. Asbestos—Textile	290	129	419	399	20	419	4.7
3. Feldspar	189	168	357	354	3	357	.8
4. Granite Cutting	177	158	335	311	11	322	3.4
5. Mica, Mining & Grinding.....	113	93	206	203	3	206	1.4
6. Pyrophyllite, Min. & Grind.....	54	73	127	125	2	127	1.5
7. Stone Quarries	81	52	133	121	13	134	9.0
8. USPHS—Pre-employment .....	..	84	84	82	2	84	2.4
9. Lead Workers .....	..	67	67	57	9	66	13.6
10. Kaolin	31	8	39	38	1	39	2.6
11. Coal	4	23	27	27	0	27	0.0
12. Talc	3	19	22	22	0	22	0.0
13. Limestone	1	4	5	5	0	5	0.0
14. Lead & Zinc Prospectors.....	..	5	5	5	0	5	0.0
15. Sand and Silica.....	1	3	4	4	0	4	0.0
16. Gold Min. & Processing.....	19	49	68	68	0	68	0.0
Total.....	1338	1330	2668	2499	140	2639	5.3

TABLE III—SUMMARY

	1940-1941	1941-1942	Total
Physical Examinations	3050	2668	5718
Bloods Collected for Serological Test.....	2750	2639	5389
Cases Autopsied	1	2	3
Compensation Hearings	10	19	29
Talks to Public Health Nurses.....	3	2	5
Special Medical Examinations.....	3	3	6
Visitors .....	..	10	10
Papers—Public Meetings .....	..	4	4
Case Reports Prepared.....	..	15	15

Publicity Service: Through the office of the Senior Publicity Specialist, who is attached to Central Administration, news releases have been regularly released during the period covered by this report. Since May 1, 1941, clippings have been added to the State Board of Health's scrap books covering 164 pages, 12 by 15 inches, or a total of approximately 28,800 square

inches. The period covered includes publicity on the defense activities which the State Board of Health has carried on and in which this Department has coöperated. In addition to his work in connection with news releases, the Publicity Specialist has given approximately 50 broadcasts over Station WPTF in Raleigh, these broadcasts being each Thursday afternoon from 2:15 to 2:30.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

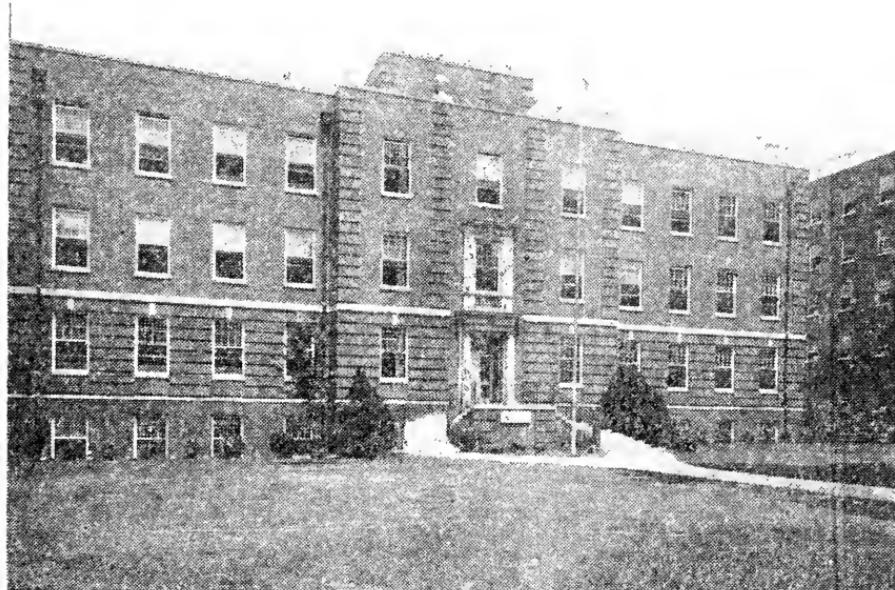
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CENTRAL BUILDING
STATE LABORATORY OF HYGIENE

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T. F. VESTAL, M. D., Director Division of Industrial Hygiene.

FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.
Prenatal Letters (series of nine monthly letters).
The Expectant Mother.
Breast Feeding.
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights.

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instruction for North Carolina Midwives.

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THE Health Bulletin



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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Notes and Comment

By THE ACTING EDITOR

RECOGNITION THOSE who have known of Dr. G. M. Cooper's work through the years and who place a high value on his accomplishments are pleased that he has been honored. When an institution in the exalted position which the University of North Carolina occupies confers an honorary degree of LLD, the recipient is indeed honored. We who appraise Dr. Cooper feel that the University in giving Dr. Cooper this degree has also honored itself. Just before conferring this degree upon Dr. Cooper with its rights and privileges Dr. Frank P. Graham gave the following citation:

"George Marion Cooper, of Sampson County, nationally distinguished as a public health officer, quiet and unassuming, but relentlessly effective, has as a state health officer, served for a longer period and in more fields than any other person. He has been a leader in practical programs for the medical care of the poor and has worked courageously to lift North Carolina from the disgrace of its high birth mortality of children and mothers. His work, pioneering in America, both for the improvement of the health of school children through free dental and tonsil clinics, and for the improvement of the health of mothers and the birth of children, has become and will continue to be an example to this and other nations and a benefaction to this and succeeding generations."

The dinner given by the public health

nurses as a tribute to Dr. Cooper is described by Miss Blee in this issue of the BULLETIN. The genuine affection manifested at this dinner should assure Dr. Cooper that his long and faithful years of toil and trouble are yielding a harvest of worth-while results and real appreciation.

DR. BULLA

When a veteran health officer speaks his mind we can be certain that he has something worth-while to say. Dr. Bulla is a veteran who has been on the firing line for more than twenty years as a local health officer. In his article on communicable diseases we have authoritative information presented in the calm dispassionate manner of a man who realizes that we cannot remake the world in a day. He points the way to progress.

WOMEN

Dr. Lucy Morgan has an unusual record of accomplishment. In a few short months she has stimulated interest among the women of several of our counties. She has not performed this feat with appeals to emotions. Her methods are those of the educator. Health in its many aspects has been the subject study. By finding the problems, surveying the needs and resources of their communities, the women developed practical and effective ways to express their views and to render service.

DR. GREENE An event of vast importance to Alamance County is described by Dr. Greene in his article. The Alamance County Tuberculosis Sanatorium strengthens the entire mechanism of the State for the protection of its people. Alamance County is fortunate. Health minded people extend to it their hearty congratulations. Other counties may not have a Francis F. Robinson with the heart and means to give them a modern sanatorium for the treatment of tuberculosis, but they can take courage and resolve to do better work than they have been doing.

To bring about an institution such as we have now in Alamance County requires good team work. There must be that laborious task of stimulating interest in the problem. Information must be collected and disseminated. The soil must be tilled until it reaches a high state of cultivation. Experienced farmers will not plant valuable seed in a tangled weed patch. Competent business men will not place their money in a philanthropic institution which is not intelligently desired by the community which it is to serve. The state-wide importance of Alamance County's Sanatorium is shown by the fact that Dr. Paul P. McCain was the principal speaker at the dedication of this institution. From the Burlington Daily Times-News we quote significant excerpts from Dr. McCain's address:

"North Carolina, which had the first sanatorium for the treatment of tuberculosis in the United States, now has three state-owned institutions representing an investment of approximately \$4,000,000 and with 1200 beds.

"In addition 20 other counties of the state have their own sanatoria ranging in capacities from 16 to 54 beds, many of them splendidly managed. These county sanatoria have a combined capacity of 949 beds, 405 of which are for negroes.

"These county sanatoria have played a tremendous part in the reduction of the death rate from tuberculosis in North Carolina from 156 per 100,000 in 1915 to 49.3 per 100,000 in 1940. Unfortunately tuberculosis is largely a disease of the poor. Tuberculosis is also a

communicable disease and it is impossible to keep the disease from spreading in over-crowded homes from the sick individuals to the other members of the family. Unfortunately our state sanatoria are still crowded and patients have to wait for some months for admission.

"In counties which have their own sanatorium patients who need to go to the State institution can go to the county sanatorium and get started on treatment and oftentimes prevent a spread of the disease which would have occurred at home. Also many patients who do not need operations or special forms of treatment can be efficiently treated in the local county sanatorium where they can get to see their loved ones frequently.

"Dr. J. W. Gleitsmann established at Asheville the first sanatorium for treatment of tuberculosis in the United States—ten years before Dr. E. L. Trudeau started the Trudeau sanatorium at Saranac Lake. Asheville and western North Carolina became famous as a tuberculosis resort. Many local private sanatoria were built in that vicinity during the early days, but they were naturally rather expensive and only those patients with a considerable amount of money could take advantage of their facilities.

"In 1907 a young physician of Greensboro, Dr. J. E. Brooks, and Dr. J. R. Gordon of Jamestown, secured an appropriation of \$15,000 from the state legislature to purchase the site and to build the North Carolina sanatorium for the treatment of tuberculosis. From this small beginning our state sanatorium program has enlarged to a capacity of 650 beds at North Carolina Sanatorium, 330 beds at Black Mountain in our western North Carolina Sanatorium, and 220 beds at Wilson in our eastern North Carolina Sanatorium, with a total investment of approximately \$4,000,000. Also there are approximately 300 beds for tuberculosis patients in the state mental hospital.

"The first public local sanatorium in North Carolina, the Red Cross Sanatorium in Wilmington, was established by the county tuberculosis association, the Red Cross, with

local contributions and appropriations from the city and county. Dr. J. C. Wessell was and is medical director.

"The first sanatorium in this state built and fully supported by county funds was the Forsyth county sanatorium built in connection with the county home in 1917, with 24 beds for both white and colored patients. Within the next few years a few other counties followed suit with small institutions. In 1923 Guilford county built the first modern county sanatorium which was anything like adequate to meet the needs of the county for both white and colored patients. In 1926 and in 1930 Mecklenburg and Forsyth followed Guilford's example and all three of these counties have splendid institutions which are approximately sufficient to care for their own needs and which compare favorably with state institutions in the south.

"The Alamance county sanatorium, a memorial to the wife of the donor, will begin

operations July 1st. Its income will be supplemented as necessary by Alamance county. It will have a staff of eight, including a part-time medical director, superintendent of nurses, another nurse, maids, cooks and orderlies."

* * *

(Extract from a letter from Major John W. Roy Norton, U. S. Army. Formerly of the Staff of the State Board of Health—Now with our European Forces.)

Print a good article on prevention of waste everywhere. The old habit of leaving some on plate for waste as good manners should be scotched. The regular field ration has been cut and will be cut more, I'm sure and the civilians are shorter. If one has a heart he can't walk along seeing little children and babies, pregnant and nursing mothers who are definitely short on many things we've been considering essential—and not determine to do all he can to stop the prevalent waste of food among Americans there and here.

Dr. Cooper Honored

By MARGARET BLEE, R. N.

Assistant Professor, School of Public Health
University of North Carolina
Chapel Hill, N. C.

PUBLIC health nurses of the State together with co-workers in public health and welfare gathered to honor Dr. George M. Cooper, Assistant State Health Officer. The group surrounded a festive board at the Carolina Inn, Chapel Hill, North Carolina, June eighth. The occasion was in recognition of his leadership in many and varied programs from which today North Carolinians are drawing social dividends by improved health.

Long ago, Dr. Cooper realized that nurses were a valuable asset to the program which he initiated, and the dependency of public health upon health nursing. Public health nurses are grateful for his guidance, counsel and friendship.

Miss Mabel Patton, R. N., an effective presiding officer, gave a brief resume of public health programs which Dr. Cooper organized and directed. After a description of activities as vivid and moving as a drama, Dr. Cooper was introduced.

Amid tumultuous applause, all guests arose and continued standing during a resounding ovation. The words of Thoreau fitted the occasion:

"So high as a tree aspires to grow,
So high will it find an atmosphere suited
to it."

Following this demonstrative acclaim were a series of brief tributes given by representatives of six different departments.

Dr. Robert B. House, Dean of Administration of the University, prefaced his laudatory remarks with two short selections on a harmonica. "One of the characteristics," said Dean House, "of a great teacher is to have students love him." He compared Dr. Cooper to a great teacher whose classroom was the state with a large enrollment whom he had taught and befriended and who loved him for his interest.

Dr. Milton J. Rosenau contrasted early public health with today's program. He delineated Dr. Cooper as a scholar, author, pioneer with vision and excellent judgment. In addition to these, his most outstanding characteristic was that he was a friend.

Dr. Carl V. Reynolds lauded the work started by Dr. Cooper, and said he had shown more vision, more courage, more determination in his pioneer work than can readily be realized. Because of this, public health work has steadily progressed. His masterpiece in health education was the HEALTH BULLETIN. It has done more to educate people throughout North Carolina than any other program.

Mr. George H. Lawrence, Assistant Professor of Public Welfare, portrayed his activities in public welfare and succinctly summed up his interest, not in public health nor in public welfare, but in people. Public health Dr. Cooper used as an instrument to show his love for people. With his wide interest, he presents to us a rare specialist, one who has extended the margins of his specialized field to embrace many activities. He realized public health could not exist without public welfare. Dr. Cooper was one of the strong leaders in organizing The Department of Social Welfare. He has brought about the co-operation of both fields for the betterment of the people.

Dr. E. McG. Hedgpeth referred to him as a devoted father and friend whom he had known over a period of years, and spoke of his interest in the social and economic areas of medicine, namely, public health.

North Carolina is proud to have Dr. Cooper, a forward leader, whose past stands as testimony of his leadership.

Mrs. H. P. Guffy represented the nine nurses in the pioneer programs under the direction of Dr. Cooper. Five of these nine were present. These faithful nurses call themselves, and are affectionately called so by others "The Nine Old Men". Mrs. Guffy gave an entertaining and humorous sketch of their pioneer work. Too often the difficulties of pioneer work are forgotten in our zeal to promote and progress public health programs. Good roads and automobiles make for easy and rapid travel, and make remote parts accessible. "In the early days," Mrs. Guffy said, "we traveled by every method known to man, boats, mules, horses, walking railroad ties to lumber camps, gripping laurel and branches of trees to swing to our destination." One of the first of the programs to be organized were the tonsil clinics. This program was active for 12 years. 23,211 children were operated on with the lowest mortality record in the world. The work connected with these clinics knew no hours as we know a regular day's work. These nurses may have been working for the cause of public health, but one sensed the enthusiasm for their long hours of work was furnished to a great extent by Dr. Cooper. This enormous amount of work accomplished during these early programs was no doubt due to teamwork of a director and his staff.

Dr. Cooper then gave a short response of appreciation to all nurses, but particularly to five present who helped him initiate programs.

The six speakers who paid tribute to the guest of honor emphasized his most salient quality which characterized him as a friend. North Carolina is fortunate indeed to have a leader whose labors in the field have wrapped him in their hearts, whose golden vision slashed a trail which we may tread steadfastly. The trail is blazed, the house is built from whose windows the lamps shed a golden mantle of friendship.

Facts About Communicable Diseases

By A. C. BULLA, M. D.

Wake County Health Officer
Raleigh, N. C.

PERSONAL health is one of our most precious assets. The public is aware, as never before, of the desirability of it. It is considered essential to life, and the means to secure it are looked upon as a personal responsibility and a right rather than a privilege.

Twenty-five years ago men were drafted for combat duty. They are being drafted today for the same purpose and for a similar cause. The standard for selecting men then cannot be compared with the standard for selecting men now, but, then, as now, physical defects were the outstanding causes for rejection of men for military duty. This fact has been called to our attention, and acts as a challenge to give more attention and to place more emphasis upon the finding and the correction of remediable physical defects early in life, that normal growth and development may take place, resulting in a more healthy and vigorous citizenry.

Most of us know the causes, the sources, and the modes of transmission of most, if not all, the acute communicable diseases, but knowledge about these diseases does not necessarily tell us what to do about them. They are all caused by germs; each by a specific kind of germ—typhoid fever by the typhoid fever germ, tuberculosis by the tuberculosis germ. Where do these germs come from? People, living human beings. They come from both sick and well people. For example, a person susceptible to typhoid fever can contract it from another person who has the disease in either mild or severe form, or from a carrier who is a person apparently well and healthy. A certain percent, perhaps 2 to 10, of all persons who have had typhoid fever remain carriers—some for life, others for only a short period of time.

May we give you three examples of typhoid

fever cases that occurred last year? The first was reported in a child of six years of age. The investigation to determine the source of infection revealed that the grandparents had had typhoid fever in 1917; laboratory examinations revealed the fact that the grandmother was a carrier, harboring live typhoid bacilli, and the source of infection in this case. The second case was reported in a child of 18 months of age. An investigation was made of all members of the family, including the servant who gave a history of having had typhoid fever many years ago; laboratory examinations revealed the fact that the servant was the carrier in this case, and the source of the infection. The third case was in a child of three years of age. The most important thing about this case was that there was no history of typhoid fever in any member of the family or servants; the laboratory examinations revealed the fact that the grandmother was a carrier and was the source of infection of this case, although, to her knowledge, she never had typhoid fever.

Well people who are immune to, as well as people who have recovered from an attack of a communicable disease, may harbor the infection and spread it to others. This is true of scarlet fever, pneumonia, cerebral spinal meningitis, bad colds, influenza, infantile paralysis, and many other communicable diseases. Since we understand the sources of infection of communicable diseases, and that they are spread to susceptible persons by contact, either direct or indirect, by contaminated water and foods, by flies, by eating and drinking after people, by coughing, sneezing, expectorating, and spreading the secretions and excretions of the body, it is not difficult to visualize how simple, how easy it is for infection to spread, and how other cases may

develop in this modern, complex civilization of ours.

We know, from past experience, that the reporting of cases, visiting the homes, putting up a sign and establishing quarantine will not control these diseases, but they will help.

We must recognize two physiological conditions in our make-up, and deal with them accordingly. These two conditions are immunity and susceptibility. What is immunity? It is a condition of the body which is resistant to a specific disease or infection of a specific nature, because of defense bodies, or anti-bodies, circulating in the blood stream. There are four kinds of immunity; namely, active, acquired, passive, and natural. Active immunity is that produced by the administration of vaccines, such as typhoid fever, whooping cough, or smallpox. Acquired immunity is sometimes the most expensive type. It is produced by having a communicable disease, such as typhoid fever, smallpox, scarlet fever, etc., and usually lasts for a lifetime. Passive immunity is that which is produced by giving diphtheria antitoxin, or tetanus antitoxin, or human convalescent serum, or placenta extract. This type of immunity lasts only from two to six weeks. Natural immunity does not occur very often except in infants who inherit a certain degree of immunity which protects them from most of the acute communicable diseases with the exception of chicken pox, smallpox, and whooping cough for the first six months of life. Now, what is susceptibility? It is just the opposite of immunity. It means that a person does not have defense bodies or anti-bodies circulating in the blood stream, therefore having no resistance to certain types of infection and if sufficiently exposed would develop the disease.

Then, to prevent and control communicable diseases, we must not rely too much upon quarantine and isolation, but upon something more certain—vaccinations and immunizations to produce immunity and therefore resistance to infection. The most reliable vaccinations and immunizations are smallpox, diphtheria, typhoid, and whooping cough vaccinations. When should they be given? Smallpox vac-

cination should be given before one year of age, certainly before 6 years of age; diphtheria vaccination between 6 and 9 months of age, certainly before 12 months of age; whooping cough from 6 to 8 months, certainly before 12 months of age; typhoid vaccination after one year of age.

How often should these vaccinations be repeated to protect against infection? In smallpox vaccination, if there is a good scar, immunity will perhaps last 10 years, or longer. Diphtheria vaccination—two injections of toxoid; the second any time from one to two months after the first has been given, followed by the Schick test two to three months later to determine if immunity has been established. Whooping cough vaccination is usually given in three to four doses, depending upon the age of the child, over a period of three to four weeks, and then one dose each year thereafter. There are other immunizing agents, such as diphtheria antitoxin, tetanus antitoxin, human convalescent serum, placenta extract. These are given to prevent diseases and also for treatment in certain diseases, and should always be given upon the advice of the physician.

After we have availed ourselves of all of these known, proved, scientific preventive measures at our disposal, we must not lose sight of the fact that there are other protective measures, such as fresh air and sunshine, cleanliness of person and home, play and exercise, rest and sleep. All of these cost but little, and are our inherited rights and should be utilized.

Now, may we call your attention to tuberculosis and the venereal diseases, which are contagious and infectious, but are in a class to themselves. There is no quarantine, there are no vaccines or sera, and the treatment for most of them covers a long period of time and is expensive.

Koch discovered the tubercle bacillus in 1882—just 60 years ago. Before that time tuberculosis was thought to be hereditary, and there were good reasons for thinking so, because it traveled in families. It travels in families today, but we know it is not heredi-

tary; it is contagious and infectious. We know today very definitely how the germ gets into the lungs, lymph stream, and the different stages of its development in the body and how it produces active tuberculosis. Many years ago, with this knowledge available, it was thought it would take only about one generation to eradicate tuberculosis, but that has not happened. The lesson to be learned was too simple to impress people with the importance of observing a few simple rules and precautionary measures. If you know people—and you do—this is easy to understand.

In 1917, the veterinarians of this country began a campaign to eradicate tuberculosis among cattle. How was this done? The tuberculin test, in cattle as in human beings, shows the infection. When a cow was found to be infected it was slaughtered; therefore, removing the source of infection. This simple procedure cannot be put into practice in eradicating tuberculosis in the human race, but the same principle can be followed. The point is this, the infected animal to the slaughter house, the case of tuberculosis to the sanatorium. The routine necessary to accomplish this in the human race would include the following: (1) A routine application of the tuberculin test to the present and future members of the entire population. (2) Periodic retesting of all persons found non-infected on previous surveys. (3) Frequent clinical and laboratory examinations, fluoroscopic examinations, X-ray of each infected person discovered during repeated epidemiological surveys. (4) Hospitalization of all persons having tuberculosis until their condition is non-infectious.

In 1938, a venereal disease control program was begun in Wake County—both city and county-wide. It has, we think, met with a certain degree of success. It is our opinion that the program should be broadened and extended until every case is found and adequately treated. Medical science has designed the weapons to be used; they are in our hands; they must be used. It is time for intelligence to take hold, by reason, rather than force, free ourselves of these long-tolerated silent diseases. Our plan for control is largely edu-

cational and is expected to achieve four main objectives. They are as follows: (1) Stimulation of public opinion and interest to include a serological test with all physical examinations. (2) Influencing individuals to avoid infection. (3) Directing individuals to competent diagnosis and treatment. (4) Persuading patients to continue treatment until cured or discharged.

As responsible citizens in a democratic community, we must play our part in the total community attack on venereal diseases and on the conditions which foster their maintenance and spread.

In addition to quarantine and isolation, vaccination and immunization, we have certain laws which, when enforced, will aid in the control of communicable diseases. The General Assembly of 1937 passed a law requiring all domestic servants to be examined by reputable physicians and secure health certificates stating that such persons are free from all contagious or infectious communicable diseases, and show the non-existence of any venereal disease which might be transmitted. In 1939, the General Assembly passed three important laws. One, requiring diphtheria immunization of all infants before they are 12 months of age. Two, an act to prevent syphilis in unborn babies in North Carolina by requiring a blood test examination of all prospective mothers. Three, an act to require the physical examination before the issuance of license to marry. Under this law, there is a proviso that a person who has a venereal disease, may be issued, after 12 months of treatment, a marriage license provided he will continue treatment until cured or discharged, and that both applicants are informed that syphilitic infection is present. There are laws, both State and local, requiring health certificates as a prerequisite for employment. The food-handling law is an example. Some industries require health certificates for employment.

We wish to say that we are not discouraged because of the lack of universal application of all known, proved preventive measures and

services available to prevent diseases, and we are sure you are not. Only time, education, and service will bring us closer to our goal—

the application of the best known scientific, proved measures to prevent sickness and suffering, and to make life safer and happier.

Community Health Education For Victory

By LUCY S. MORGAN, *Ph. D.*

Health Education Consultant
Cumberland County Health Department

MANY times during the past year it is probable that North Carolina health officers and their staff members have felt that "it just couldn't be done," and frequently have wished that the Army or Navy had selected some town or county other than theirs as a camp locale. Such sentiments are easily understandable. Shifting populations, housing shortages, indigents in droves, prostitutes in battalions, trailer camps in every grove, and mushroom growth cafes by the score, have made the task of local and state health guardians a very difficult one. But, on the sidelines, eagerly awaiting a call to action is an untapped reservoir of lay leadership which can be of invaluable assistance. More than that, this same untapped reservoir offers a solution which goes down to the grass roots—the beginning point of community life.

At Fayetteville last September, an experiment in Community Health Education was launched as an effort to focus the attention of the public on some of the health problems which had developed and were developing in that defense area. Those concerned with planning and of organizing this program recognized from the beginning that the best way to motivate a community health education program at this time would be to relate it to National Defense, with the plan of operation as follows:

Twenty-five of the leading women in Fayetteville were interviewed by a health education specialist loaned to the State health

department by the U. S. Public Health Service and assigned to Fayetteville. These women were asked whether they were concerned over the physical condition of the young men of the nation, and what they planned to do about conditions in their own communities. They also were asked what they thought about local health problems and if they would be willing to sponsor a program of health education to study these and other health matters. Every person interviewed felt that the problems **WERE** serious, and that a concerted effort should be made to remedy them.

Upon completion of the interviews a meeting was scheduled to which all the leading women of Fayetteville were invited. At this assembly it was suggested and agreed that an organization designed for an all-out health effort should be formed. A Central Planning Committee was elected which worked out a plan of organization and later reported back to the entire group. At a subsequent meeting the name "Woman's Committee Health Education Program For Defense" was selected. One of the program's chief objectives was to organize all Fayetteville women—both white and Negro—into neighborhood study groups so that they might be prepared for any emergency.

The city was divided into districts by the Central Planning Committee and the districts were sub-divided into blocks or neighborhood areas with a chairman chosen for each. It was the duty of the "Block" chairman to

visit every woman living in her area and invite her to enroll in a neighborhood study group. These groups were scheduled for monthly meetings at the homes of their respective chairmen to study and discuss health problems. Motion pictures and pamphlets were provided for the meetings by the local health department.

Preceding the monthly "Block" meetings, all chairmen met to receive instructions and review materials selected for group study. A representative from the local health department, usually the Health Officer, assisted with these meetings. Subjects selected by the committee for study were those of particular importance to the defense area and included: venereal diseases; nutrition; tuberculosis; dental care; sanitation; cancer; and colds.

The Negro population was reached through the same type of organization as the white, and was given identical service by the local health department.

During November, in addition to the regular monthly meetings, the Woman's Committee planned and sponsored a "Quiz Corner" under the Old Market House in Fayetteville. Although the "Corner" did not open officially until 10:00 a. m., volunteer workers began installing exhibits and posters at 4:30 a. m. and other volunteers reported for duty throughout the day. It was only after the last exhibit had been taken down close to midnight that the chairman left her post at the "Corner." White "District" chairmen were in charge of the program during the day, Negro "District" chairmen at night, and all were responsible for giving quizzes, explaining the health exhibits, and assisting with the showing of motion pictures. A crowd estimated at 5,000 persons came by the Corner during the day and night and more than 300 persons took the "Quiz." Radio broadcasts direct from the scene were made three times during the day with several civic and health officials taking an active part.

Exhibits and motion pictures were provided by the U. S. Public Health Service, the Farm Security Administration, the Fayetteville Health Department and the Connecticut

Dairy and Food Council. Pamphlets, furnished by the local health department, were distributed free to passersby.

The Fayetteville Woman's Committee also sponsored and prepared weekly radio programs, planned and wrote newspaper articles, gave "Victory" luncheons, and organized classes for the Red Cross in home nursing and nutrition.

On March 25, 1942, the Committee made a community survey which was designated as "Know Your City Day"—a project which proved to be a great stimulus to the group. Eighty members of the committee, working in teams, spent this one day with all the Fayetteville agencies and organizations which in any way contribute to the community health program. These included: clinics, hospitals, medical and dental societies, Red Cross, welfare department, housing project, schools, library, Boy and Girl Scouts, recreation department, United Service Organizations, courts, restaurants, Department of Agriculture, and The Farm Security Administration.

Team reports are being presented at weekly meetings in all of the "districts". When these reports have been reviewed, the Committee expects to make specific recommendations for civic betterment, and to follow these by community action.

The Fayetteville health education program soon extended into other towns and to Fort Bragg. In these areas the women have organized and are participating in various phases of the program. Women's Committees have also been organized in Robeson County, and programs have been developed in Lumberton, Fairmont, Red Springs, Rowland, Maxton, St. Pauls, Pembroke, and Parkton. A second health education specialist has been loaned to North Carolina by the U. S. Public Health Service and assigned to Robeson County to assist the local health department in organizing a Community Health Education Program. In general, the Robeson County programs resemble the Fayetteville - Cumberland County one, but there are individual differences because each town has designed its program to meet its own health defense needs. Because of

the rural nature of Robeson County, a council was formed to coordinate the activities of the eight towns and serve as a clearing house for ideas. In addition to the organized study program, the Woman's Committee of Robeson County has sponsored "Quiz Corners" in three towns at which there was an approximate attendance of 4,000. They have also provided assistance for all of the pre-natal clinics in six towns and arranged for twenty-two Red Cross courses to be given in eight communities. They were responsible, as well, for the establishment of a public health clinic in a town where formerly such a clinic has been opposed.

One of the most significant accomplishments of the Community Health Education Program was to stimulate professional workers in both Robeson and Cumberland Counties to form Co-ordinating Councils or Councils of Social Agencies, which will not only advise lay groups, but also work out long range programs for the two counties.

There is a growing interest in community health education, as evidenced by the fact that New Hanover and Craven counties recently have organized programs, and other counties have asked for assistance in planning along similar lines. In New Hanover and Craven counties, the program operates as a part of Civilian Defense: "District" chairmen are called "Zone" chairmen, "Block" chairmen are designated as "Section" chairmen; but the objectives and general plan of action are the same as those in the other counties. Rural women in these counties are being reached through the neighborhood delineation groups of the Agriculture Extension Service.

Materials used in the various programs have been secured from several sources. Films and leaflets on nutrition, dental care, pneumonia, cancer, tuberculosis, venereal disease and other health subjects were obtained for use in the study programs from sources such as the N. C. State Board of Health, U. S. Public Health Service, and the Metropolitan Life Insurance Company.

Thousands of individuals have been reached. Statistics, though they represent the customary evaluation of public health projects, do not

tell the whole story. There are people who have participated in these programs who have found out for the first time that a community has many problems, that these problems are all related and are worthy of the consideration of every good citizen. There are people who admit that they have blocked other programs over the years, simply because they didn't know the facts. And, there are those "southern ladies" who wouldn't mention words like syphilis and gonorrhea last fall, but who recently were willing to spend hours in venereal disease clinics learning the facts about these diseases and the way in which they are handled by the health departments. There are Negroes who, on a cold winter night, or after a hard day's work in the field, have walked miles to see a health film. A few days later they walked more miles to get a blood test. There is the school teacher who saw a film on tuberculosis, went in for a chest examination and found he had an active case of the disease—the woman who knew she had a sore that needed attention but was afraid to find out the truth until she saw a cancer film. There are the women in mill towns who have made a house-to-house canvass to urge mothers to take their children to the clinics. And these same women who came directly from the cotton mill looms, with lint still on their clothes, to learn about health, and to take classes in home nursing, in order that they could do a better job of taking care of their own children. There are those people who had always thought of the health departments as an organization to take care of the poor—mostly poor Negroes—but who now know and appreciate the work that is being done. Included in this group are individuals who, for the first time, have realized that there is a leadership to be found among residents at the "bottom of the hill" as well as at the top, and that everybody has a part to play in a true community program.

For some time it has been recognized that no matter how adequate programs of sanitation, communicable disease control, and law enforcement may be, a community cannot attain its maximum health without a program

of health education planned for the community as a whole. Today, problems on the home front are mounting by the hour, while health department personnel is rapidly being drafted for war services. Is it not time for

health officials to utilize the energies of both lay and professional groups and to make health education an aid to victory? Not tomorrow but NOW? It is time to realize that "NOW" is here.

The Tuberculosis Sanatorium of Alamance County

By DR. P. Y. GREENE, M. D.

County Health Officer
Graham, N. C.

ALAMANCE County has now joined the ranks of those counties having facilities for the treatment of tuberculosis. On Saturday afternoon, June 20th, its new Tuberculosis Sanatorium was dedicated. Principal speaker for the afternoon was Dr. P. P. McCain, who outlined the progress of the construction of sanatoriums throughout the State for the care of tuberculosis patients.

Alamance County's new Sanatorium was made possible by the gift of Mr. Francis F. Robinson of Southern Pines of the building and grounds and the complete renovation of the building so as to make it meet the requirements of a first class institution for the treatment of tuberculosis.

The organized control of tuberculosis within the county began with the establishment of the Health Department in 1938. During the past four years the department has, with the cooperation of the Extension Division of the North Carolina Sanatorium, conducted semi-annual clinics of one week each for the examination of adults who were contacts or suspects. Also, during this period all school children from the fourth grade through high school were being given the tuberculin test, with X-rays of those who showed a positive reaction. In addition to this, an effort has been made to get the practicing physicians of the county to report immediately upon diagnosis

all individuals found to be suffering from any type of tuberculosis.

Since the department was established in July, 1938, the following number of examinations and services have been rendered in the field of tuberculosis control: Tuberculin Tests, 8,567; X-ray examinations, 3,767; Nursing Visits, 2,386. During this time a total of 271 cases of tuberculosis have been reported or found in the county. Of these, 108 were childhood; 159 were pulmonary; and 4 were classified as other. All cases reported are admitted to nursing service. As much attention as possible is given to instruction of the patient as to better home methods. Every effort possible is made to secure adequate treatment in the Sanatorium.

In the Spring of 1940 it was realized that if the control of tuberculosis was to be done thoroughly in the county that organizations and individuals outside the Health Department must be active in its control. The Nurses' Club of Alamance County sponsored a Tuberculosis Association. During the first year progress was slow. With the beginning of the second year we were fortunate in securing a very wide awake person for president, Mr. Ralph Scott. He selected for the Seal Chairman Mrs. Donald E. Robinson who is one of the most active persons in community improvement in the county. It was largely through Doctor and

Mrs. Robinson's influence that Mr. Francis Robinson became interested in buying from the former Carolina Rayon Corporation its club house and the renovation thereof to make it suitable for a Tuberculosis Sanatorium. When the 1941 Christmas Seal campaign was over, more than twice as many seals had been sold as the year before. In addition to this, approximately \$3,500 was donated toward equipping the new sanatorium by individuals and organizations of the county. This has enabled the Sanatorium to be supplied with up-to-date equipment throughout. The X-ray equipment is a gift of Mr. B. E. Jordan of Saxapahaw. The new Sanatorium is now the property of Alamance County. Its operation will be in charge of the Board of Trustees of the Alamance General County Hospital. Patients who are financially able will pay the cost of their treatment. Alamance County has guaranteed to supplement funds of the Sanatorium to such an extent that no person having tuberculosis in Alamance County need go untreated even though he may be able to pay but a part or nothing at all.

The building itself is of brick and steel. It is well constructed and fire resistant throughout. At present there is provided a women's white ward of seven beds, a men's white ward of seven beds, two large rooms for colored men with seven beds, and two large rooms for colored women with seven beds. One additional room which may be used will accommodate two beds, making a total of 30 beds. In the basement of the building, there are three large rooms that may be used for patients. These rooms are large enough for from six to nine beds. In the center of the building is a large lounge for white patients. A porch in connection with the colored wing has been enclosed so as to allow a lounge for colored patients. Two

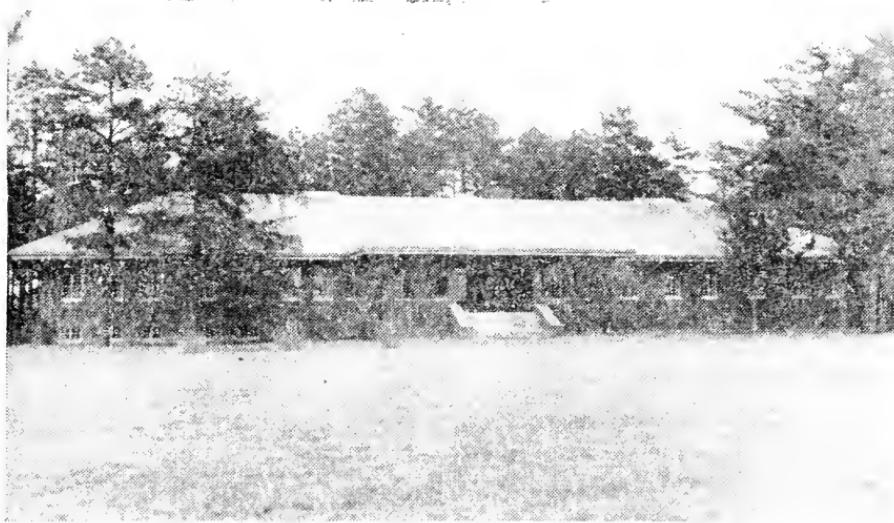
rooms and an enclosed porch has been reserved for the staff nurses. In another room of the building there has been installed new X-ray equipment, a pneumothorax machine, sterilizers, and cabinets. Near-by is a general utility room. The kitchen consists of one large room equipped with a modern stove and a twelve foot refrigerator. In the adjoining room there is a mechanical dish washer, suitable tables, cabinets, and drains. Beyond the kitchen a porch has been enclosed and which will be an ideal place for use with the kitchen. The heating plant has been completely rebuilt and equipped with a stoker. Facilities have been provided for heating more than 400 gallons of water at one time. To the North of the building there was excavated a place large enough to take care of storage of coal. There is space for storing a carload or more of coal.

The plot of land on which the building is located contains twelve acres, there being in front a lawn of approximately two acres, and back of the building a grove of pine trees.

The Sanatorium was opened for the acceptance of patients on July 1st with the following staff: Dr. F. T. Harper, local practicing physician, who has had four years experience at the State Sanatorium, as medical director; Miss Ialenn Andrews, registered nurse, superintendent, assisted by one graduate nurse, one practical nurse, two maids, two orderlies, and two cooks.

In addition to the actual care of patients in residence at the Sanatorium, clinics will be conducted once a month.

We of Alamance County feel that with such adequate facilities for the control of tuberculosis, we can do much to wipe out this disease that has caused so much suffering to humanity.



TUBERCULOSIS SANATORIUM OF ALAMANCE COUNTY

Office of Civilian Defense WASHINGTON, D. C.

Operations Letter No. 46.

SUBJECT: HOW TO PROTECT YOURSELF
AGAINST GAS.

The following information on war gases is supplied for general publication because of the possibility that they may at some time be used by the enemy. If people will remember a few simple facts, they will have no unreasonable fear of this agent.

I. War gases stay close to the ground, for they are heavier than air. To get out of a gassed area, simply walk against the wind or go upstairs.

II. Gas is irritating and annoying to the eyes, nose, lungs, or to the skin, but it is usually harmless if you do not become panicky but promptly leave the gas area and cleanse yourself. A soldier must put on a mask where it is necessary to remain in the contaminated area, but a civilian can go up on the second or third floor and literally ignore it if the windows are kept closed.

III. If the gas should get on your skin, you can prevent it from doing much harm by sponging it off as quickly as possible with a piece of clothing, such as a handkerchief, and applying some neutralizing substance, followed by a thorough bath, preferably a shower, with common laundry soap and water.

(Continued on page 16)



Roy Crane Tootte, son of Odell Tootte and wife. They follow State Board of Health advice.



Joan Elizabeth Bodenheimer, daughter of Mr. and Mrs. Holland Bodenheimer, Rt. 1, Kernersville, N. C., was born July 14, 1941. The care of this child has been guided by the principles set forth in the book, "Infant Care." She has never been ill, is well trained, has been immunized for Whooping Cough, Diphtheria, and enjoys good health.

OFFICE OF CIVILIAN DEFENSE

(Continued from page 15)

IV. If you are indoors, stay there with doors and windows closed, and go up to the second or third story. Stay out of basements. Turn off the air conditioning, and stop up fireplaces and any other large openings.

V. Some gases are spread as oily droplets which blister and burn the skin and eyes. If you are outside when gas is used do not look up. Tear off a piece of clothing or use a handkerchief to blot any drops of liquid from your skin and throw the contaminated cloth away. Blot; do not rub, as rubbing will spread the liquid. Then go home, if it is nearby, or to the nearest place where you can wash immediately with soap and water and cleanse yourself in the following manner:

1. Remove all outer clothing outside the

house, since gas can be transmitted to others from contaminated clothing. Put it preferably in a covered garbage pail.

2. Apply one of the following effective household remedies to the part of your skin that has been contaminated; Chlorox or similar household bleach (for mustard); peroxide of hydrogen (for Lewisite); paste or solution of baking soda if you have no peroxide or bleach. If you do not know the gas, use both peroxide and bleach. Keep bleach and peroxide out of the eyes. **Do not waste time looking for these remedies;** bathe immediately if they are not at hand.

3. After entering the house, wash the bleach or peroxide from hands with laundry soap and water and then wash the face. Remove the underclothing, place it in a covered garbage pail, and enter the bathroom.

4. Irrigate the eyes with large amounts of lukewarm 2 percent solution of baking soda (one tablespoonful to a quart), or else with plain water. Use an ordinary irrigating douche bag or an eye irrigator. If you do not have these, let plain warm water pour into the eyes from the shower, washing them thoroughly. Do not press or rub the eyes.

5. Lastly, take a shower, using laundry soap and hot water.

6. If the nose and throat feel irritated, wash them out also with baking soda solution.

Remember:

Soldiers require gas masks because they must remain in the contaminated area. Civilians can get out of the gas area or get above the level of the gas, where they do not need gas masks or protective clothing.

Injured persons, who are gassed, require decontamination before they can be admitted to hospitals. All other civilians can best prevent any serious injury by promptly helping themselves in the manner outlined, using a kitchen or bathroom, laundry soap and water, and a few materials found in every household.

James M. Landis
Director.



The Health Bulletin

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
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The Expectant Mother	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

P.-T.-A. Wartime Pledge



WE, THE MEMBERS of the National Congress of Parents and Teachers, in defense of our beloved country and our country's most sacred heritage and responsibility, her growing sons and daughters, do hereby solemnly pledge ourselves, individually and as an organization,

TO REMEMBER with reverence and love the ideals of our Founders, who cherished above all else the welfare of the whole child;

TO CONTINUE with zeal and devotion our efforts to secure and preserve the good life for all children, even in the face of war and disaster;

TO PERSEVERE in discovering new avenues of service and help to youth;

TO STRIVE forever forward, counting no effort wasted that brings us a little nearer to the ideal of a world founded on the principle of human brotherhood;

TO PROTECT our children against all the dangers of war, whether those dangers be physical, mental, or spiritual; and

TO KEEP THE FAITH delivered unto us by our forefathers, who hewed this America out of the wilderness and dedicated it to liberty, justice, happiness, and truth for every human being.

Notes and Comment

By THE ACTING EDITOR

HEALTH TEACHER

ANOTHER September, the beginning of a new school year, and the health of the school child is a special objective of THE HEALTH BULLETIN. That objective cannot be obtained without health education. We are privileged to carry on our front cover the likeness of a man who has done more for health education than perhaps any other person. Since 1912 Dr. M. J. Rosenau has been teaching medical students, health officers, sanitary engineers, and other public health personnel. In thirty years of teaching he has had students from every state in the union and from practically every nation of the world. As a rule, students are critical appraisers of their teachers. After courses are finished and credits duly recorded students may make uncomplimentary remarks or show lack of enthusiasm for certain of their professors. We have never heard one of his students utter an unkind word for Dr. Rosenau, but if a word of this sort were uttered in the presence of a vast majority of his students, a mighty chorus would be lifted up in his praise. No man ever had more admiring students, more enthusiastic students nor more loyal students whose affections he has retained through the years. Dr. Rosenau has exercised a great influence far beyond his lecture room. His textbook, "Preventive Medicine and Hygiene", appearing in 1912, passing through many editions, has been without rival, but has had many imitators. If the library of a health worker were to be limited to one book, you would find only Rosenau's "Preventive Medicine and Hygiene."

Before he became a teacher by profession Dr. Rosenau served on the staff and as a director of the Hygienic Laboratory of the United States Public Health Service. This institution is now known as the National Institute of Health. There he secured recognition and fame quite sufficient to place him in

Science's Hall of Fame. But as a teacher his influence was broadened until it extended its helping hand down to the humblest of homes in the four corners of the world. Both at Harvard and at the University of North Carolina he literally founded schools of public health. During the years he has taught and inspired students who themselves have become teachers of teachers. Through him the gospel of Public Health has been preached to untold millions.

* * * *

THE TEACHER AND DEFECTIVE HEARING

The classroom teacher in the public schools of North Carolina has a multiplicity of duties.—Perhaps the future may free her from some of these duties, but for the present the health problems of her pupils give her both the responsibility and opportunity of helpful service. She can help those who have defective hearing. The Los Angeles, California, city schools Section of Education of Special Children, issued the following memorandum which contains many practical suggestions:

OBSERVABLE BEHAVIORS WHICH MAY HELP TEACHERS AND MOTHERS TO DISCOVER HEARING DIFFICULTIES AMONG SCHOOL CHILDREN

I. Recognition of Imperfect Hearing in Its Early Stages.

Hearing impairment is, perhaps, the hardest of all physical handicaps to detect because there is no outward sign of the disability. There are, however, certain signs for which a classroom teacher can watch and upon which she can check in order to find out whether or not the child has a loss of hearing. Parents and teachers should be on the lookout for signs of hearing trouble. The hard of hearing child may show some of the following symptoms:

1. Continual inattention and lack of interest in general conversation.

2. Failure to respond when called upon.
3. Getting directions wrong or not at all.
4. Constant mistakes in carrying out directions and in answers to questions.
5. Repeatedly asking "What did you say?"
6. Bewildered expression when directions are being given to class.
7. Habitual turning the head to bring "best" ear nearer to speaker.
8. Incorrect pronunciation of familiar words, drops the sound of "s" from his speech.
9. Undue restlessness and evidence of strained nerves. Weary and exhausted before day is half over.
10. Draws away from the group and shows a tendency to play alone or to become morose and resentful. Avoids people.
11. Moisture or discharge from ear canal.
12. Pain or noises in the ear. Has frequent colds.

II. Health Rules.

Hearing loss is more likely to get worse than better. Health rules will help avoid hearing trouble in childhood. Partial deafness is not likely to be outgrown.

1. Keep the whole body in health. Sleep, exercise, sun-bathing, deep breathing, a balanced diet and laughter help keep you well.
2. Keep away from children's diseases. Measles, scarlet fever, tonsilitis, influenza, diphtheria, and infantile paralysis are dangerous to hearing.
3. Never trifle with ear-ache. Do not try "cures" or home remedies. Get expert advice.
4. Do not put hard, pointed instruments into the ear-canal.
5. Protect ears when swimming or diving. Never swim in water that may be polluted.
6. If we are growing fast we measure our height; if we are thin, we get weighed; if we don't hear perfectly we have a hearing test, and act accordingly.

7. If words are hard to pronounce because you do not hear them clearly, begin speech improvement exercises and speech-reading immediately. Everyone is helped by better speech.
8. Notice how it feels to pronounce a new word correctly. Say it over and over and you need never pronounce it incorrectly, even if you do not hear it.

* * *

DR. ENNETT As a kind and thoughtful physician who has devoted long years to health problems, particularly those of school children, Dr. Ennett is especially qualified to present the subject, "School Health in Time of War". If we will follow, and what school cannot follow, his advice we can do much to protect the health of our future citizens. These young people will soon be called upon to carry the heavy and difficult problems of winning the peace which is even more important than winning the war. Unless we are qualified to win peace there is not much object in winning the war.

* * *

OTHERS PLEASED Pleasure is multiplied when others share it with us. It is, therefore, most gratifying for notable publications such as Southern Medicine and Surgery and The Progressive Farmer to be pleased with the honor conferred upon Dr. George M. Cooper by the University of North Carolina:

*A PEOPLE'S GRATITUDE

by

James K. Hall, M.D.

Richmond, Va.

The University of North Carolina at its recent commencement conferred an honorary degree on Doctor George Marion Cooper. Had Jesus known such as Doctor Cooper He might not have given us the epigram that a prophet hath no honor in his own country. All of the hundred Trustees of the University of North Carolina know Doctor Cooper. They manifested by the bestowal of the earned degree their appreciation of Doctor Cooper's years

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Southern Medicine & Surgery, Charlotte, N. C.

of deep and diligent devotion to the welfare of the people—all of the people—of North Carolina.

The University of North Carolina, the oldest of our State Universities, has shown its appreciation of the exceptional services of its Public Health servants. In 1888 this venerable institution conferred the L. L. D. degree on Dr. Thomas Fanning Wood, The Apostle of Public Health in this State. That was four years before Dr. Wood's death, and after he had been State Health Officer 11 years. In 1912 the same degree was conferred on Dr. Richard H. Lewis, Dr. Wood's able coadjutor and successor in this office, three years after Dr. Lewis' retirement from a service of 17 years as State Health Officer. Then in 1929 the degree of D. Sc. was conferred on Dr. C. A. Shore in recognition of his distinguished service as Director of the State Laboratory for 21 years.

For a sufficient length of time to learn the meaning of the practice of medicine. Doctor Cooper was a family doctor in eastern North Carolina. In that activity he wrestled at first with his own limitations of medical knowledge and with disease and ignorance and poverty amongst the people. But Doctor Cooper had been called, and from the day of his graduation in 1905 from the University College of Medicine in Richmond he has given of himself wholly and without consideration for himself to the welfare of his fellow-mortals.

For many years he has been a member of the official staff of the State Board of Health of North Carolina. In his official function he has done many things and all of them well, but I have long looked upon the coming into my office each month of the Bulletin of the Board of Health as a personal visit because Doctor Cooper has been its Editor. Through the medium of its pages he has talked in plain and simple and honest language to the people of the State about disease and about health.

I can think of no other official of North Carolina who has more devotedly and cheerfully and helpfully given himself to the welfare of the people of the State than

Doctor Cooper. He represents all that is best in manhood and in medicine—in North Carolina and in the world.

***FROM THE PROGRESSIVE FARMER—
WE CONGRATULATE**

Two men who have rendered distinguished service to North Carolina farm people—James G. K. McClure, General Manager of the Farmers Federation, Inc., and Dr. George M. Cooper, Assistant State Health Officer—who have just received honorary degrees from the University of North Carolina. Mr. McClure has not only helped mountain farmers find markets for farm products but has promoted "The Lord's Acre Plan" for supporting rural churches. Dr. Cooper was formerly a country doctor in Sampson County and is one public official who has never forgotten that most of the people of North Carolina are rural.

* * *

BULLETINS We believe that all part-time or amateur editors will find in "Bulletins—How to Make Them More Effective" by Miss Catherine Emig, many helpful suggestions which will make our task less difficult and our efforts more effective. In carefully written paragraphs under the headings—"Editorial Policy", "Content", "Editorial Technique", "The Appearance of Your Bulletin", "Production", and "Some Production Costs", we have 24 pages of competent advice. Those who wish to present their cause advantageously should find Miss Emig's guide to be helpful. (See Books).

* * *

ACCIDENTS At the clinics for crippled children Miss Council has been distressed by the large number of patients who have been maimed by home accidents. She has a genuine desire to prevent crippling accidents and has given expression to this desire in this issue of the BULLETIN. For years we have heard a great deal about highway accidents but very little about home accidents. Yet the home continuously claims

a higher toll than the highway. The rationing of tires and gasoline is already decreasing highway accidents. Intelligent care can make a reduction in those of the home.

Many of our cuts and abrasions are over-treated. Antiseptics frequently cause more damage to the patient than the original injury. An antiseptic which will kill germs will injure or irritate body tissues. The best first-aid treatment is merely to pour cold or tepid water gently over the injured area. This will wash away loosely attached foreign bodies. Handle the injured part gently and apply a sterile bandage or if this is not available, use clean cotton cloth. The money ordinarily spent for antiseptics can be invested much more advantageously for sterile bandages. In case of doubt about the desirability of seeing a physician—see one. He can give you more for your money when he sees the patient early. All puncture wounds are potential causes of Tetanus which does not cripple, but does kill. For all puncture wounds a physician should be consulted.

* * *

WASTE To the plea of Dr. Roy Norton, which we published in our last issue, Mr. Richardson has responded. The average American household wastes in one way or another enough wholesome food to feed another human being. The statement is true—"Food will win the war". Are we wasting our ammunition? With so many nations short of food and so many people actually starving, food can do much to win the peace. "We cannot have all we want, if our soldiers and sailors are to have all they need."—Franklin D. Roosevelt.

* * *

ON THE RECORD Dr. Wright has briefly given us a glimpse of the reasons why records are important in clinics. Records are also important in the home. Of the so-called children's diseases, how many mothers can remember what or when their teen age children have had? Yet when they go away to school, apply for life insurance, or come in contact with quarantine problems, questions are asked. If you guess

now and guess again a year from now, will your guesses agree? If they do not, the records made of your guesses may embarrass you.

* * *

IGNORANCE SURVEY

Sharpe and Dohme sponsored a study which revealed startling yet very important findings. From the report we quote:

"Realizing the importance of making available to the medical profession the public's attitude and knowledge of immunization, Elmo Roper, national public opinion sampling authority, made the first extensive survey on immunization.

"Mr. Roper's 'scientific sampling' type of survey assures accuracy. For example, Mr. Roper in his surveys forecast the presidential election of 1936 within 1% and the election of 1940 within $\frac{1}{2}$ of 1%.

"The 3,000 Americans interviewed for this immunization survey were selected scientifically so the group was representative of the entire nation.

"For example, 3% of the 3,000 people interviewed reside in the mountain states in which 3% of the American population actually live. Likewise, urban and rural, men and women, age groups, the various occupations and economic levels are represented in their proper proportions.

"The questions asked in this immunization survey were phrased so their meaning was absolutely clear and without a suggestion of bias or prejudice. The actual interviewing was carried out by regular Roper interviewers.

"The field work throughout the United States by the Roper organization was completed between September 24 and October 6, 1941. If, on October 7, you had been one of the Roper interviewers—thinking back on what you had just experienced of the public's knowledge of immunization—your feeling would be that the public seemed to have a fair understanding of immunization.

"Yet, the actual tabulation of the survey shows much confusion. For example, in the case of smallpox, over 18% of American mothers felt that smallpox vaccination was

'worse than the disease itself.'

"Immunization against smallpox and diphtheria has been available for many years. Yet 24% of the people don't know or don't believe that vaccination can prevent smallpox; 28% of the people don't know or don't believe diphtheria can be prevented by inoculation.

"Six out of every 10 people said inoculation or vaccination did not prevent a person from getting diphtheria or smallpox but thought immunization would lessen the disease; another 2 out of 10 said immunization might be effective in some cases; another 1 out of every 10 remarked, 'if you're going to get it, you're going to get it.'

"When all mothers who said a person could be prevented from getting diphtheria were asked 'if inoculation were necessary more than once,' 58% either didn't know or said once was enough.

"Take the Roper question, 'when would you have your children vaccinated against smallpox?' Medical opinion, as the physician knows, advises vaccination between 3 and 12 months, again at 6 and 12 years, as well as immediately after exposure. Yet 35% of mothers would not have their children vaccinated until they had been exposed. 22% would wait until school age.

"The U. S. Public Health Service reports that more die of whooping cough than of diphtheria, scarlet fever, smallpox or typhoid fever. In fact, a high percentage of all deaths for infants under one year are due to whooping cough. However, 18% of the public believes that whooping cough is 'a simple disease and no cause for worry'. 52% of the

public doesn't know that a child can be protected from whooping cough by vaccination."

We hope that North Carolinians are not as ignorant about immunization as this survey showed average Americans to be. Veteran health workers realize that ignorance far outranks poverty as the cause of preventable diseases. Immunization has at least two appeals to the average citizen. In the first place, by it we can secure protection from certain diseases for ourselves, our children, or our loved ones. This is, of course, selfish interest, but all of us have selfishness in varying degrees as an integral part of our make-up. In the second place, we are confident that every human being has a desire to be helpful to others and wishes to promote public well being. We can enjoy this desire by telling the less informed of the advantages of immunization, or if we cannot do that, we can at least direct them to dependable sources of information. Some of these will take advantage of the facilities available to them and theirs. Those too ignorant or too complacent to use modern preventive measures may be classified as the helpless. But there is help for the helpless. Forest fires do not burn vigorously where there is little combustible material. Epidemics do not occur in communities which do not have an abundant supply of susceptible individuals. By immunizing a sufficient number of our people, particularly children, we can not only protect those who are immunized, but by decreasing the percentage of susceptibles we lessen the probability of epidemics. In this way we help protect those who will not protect themselves. We have helped the helpless.

School Health In Time Of War

By N. THOMAS ENNETT, M. D.

Pitt County Health Officer
Greenville, N. C.

VACATION is over. Once more Young America gathers in the class room. Once more the teacher and the parent, in the care

of the child, divide responsibility. And unless there is a full understanding between teacher and parent, the child's interests must suffer. In

peace times such an understanding is desirable, in war time, it is essential. All persons in all walks of life must adjust themselves to our war effort. At this writing we have already adjusted to the tire, gasoline, and the sugar shortage. As the war goes on, other shortages are bound to occur which will further alter our way of life. Winning the war must be our aim--first and last.

Another shortage to which we must adjust, the existence of which is the reason for this article, is the shortage of medical and surgical service. So badly are doctors needed for the men in service, that doctors who are left behind find themselves unable to meet the demands for medical service on the home front. This means that the doctor's time and skill must be reserved only for the more serious illnesses and accidents. The question naturally arises, how can the doctor be spared from calls to minor accidents and disease? The answer is not simple, but when it comes to eliminating, or at least reducing the need for medical care of school children, the responsibility is chiefly that of the school and the home, more specifically the teacher and the mother.

The teacher must teach the child good health habits with more emphasis than she has ever taught him before. He should be instructed that good health habits are not made up solely of washing his face and hands, brushing his hair and brushing his teeth, but it means staying at home when he has a cold, carrying a handkerchief for covering a cough, exercise and rest in keeping with his strength and nutrition, long hours of sleep, regular eating habits and a well balanced diet. Some of these items call for the attention of the parent, chiefly, and some for the attention of the teacher, and others call for the attention of both.

A complete immunization of all children for diphtheria, typhoid, and whooping cough would eliminate much sickness, and therefore, limit calls for the doctor's service. Though the matter of immunization is chiefly the responsibility of the home, the school also has a responsibility. For instance, the State

Law says that no child may enter school who has not been vaccinated against diphtheria. If the school would enforce this Law, (the Health Department does not have the authority) we would have all school children protected against diphtheria, at least, and spare the doctor of having to treat the disease.

When it comes to accidents, this is also, clearly, a joint responsibility of the school and the home. Home instruction as to the danger in climbing trees, sheds, and other high places, caution as to swimming hazards and the hazard in the use of guns and sharp tools would often save the doctor's time and perhaps save a life, careful supervision on the school playground would also reduce the number of accidents and save the time of the doctor.

Those of us who have had experience in school health work know that the most common physical defects in school children are dental defects, and next to dental defects is malnutrition. Of course dental defects themselves do not call for the attention of the physician, but that of the dentist, however, dental defects and poor oral hygiene may result in illness calling for medical attention. Mouth health is distinctly a joint responsibility of the home and the school. (And may we say here that the time of the dentist must also be conserved.)

Malnutrition is the most serious medical condition found in school children. It is also a responsibility of the school and the home. The teacher may take issue with this statement. She may argue that as malnutrition originates in the home, it is in no way the concern of the school. It is our opinion, however, that if a teacher will become sufficiently interested in the malnourished child, she can do more to correct this condition than can the home. The teacher has the advantage of working with a group, and in this way, can create a spirit of rivalry among the children in the matter of gaining weight, a thing not possible in the home. The two main points in over-coming malnutrition are, proper diet in sufficient amount and rest. The average malnourished child needs rest more than he

needs anything else in the world. Here we may with profit draw a lesson from the farmer who pens the pigs he would fatten. The home should recognize malnutrition as a serious condition and do everything possible to correct it. This means early bed hours, one or two hours rest in the afternoon, proper food in sufficient quantity, plenty of time at the table and a minimum amount of chores around the house. Where the child has a poor appetite, don't get him a "tonic" but let him lie down fifteen minutes before eating. Rest is a better appetizer than all the tonics in the drug store. By improving the child's nutrition, he has fewer illnesses, and in this way, we save the time of the doctor.

Another thing which the home and the school can do with the idea of conserving the time of the doctor is for each to have a well supplied First Aid Cabinet and, in addition, know the fundamentals in First Aid Care.

And perhaps here would be a good place to speak of the danger of the common practice of giving purgatives to children who have a "pain in the stomach." Often pains in the stomach are not just a case of "colic" or indigestion, but the pain is due to appendicitis, and in such cases, a purgative may bring on a ruptured appendix, peritonitis and death. Putting the child at absolute rest in bed, no food while the pain is present, not even water by mouth if it causes vomiting, or even nausea, will often save a call for the doctor, or a hurried trip to the hospital, and

an emergency operation. (If, in spite of these precautions, the symptoms get worse, be sure to call the doctor without delay.) A low enema may be given with safety in cases of pain in the stomach, but never purgatives unless upon the advice of a physician. The one thing that the teacher may do to prevent the attacks of appendicitis at school is to explain to her class that if in running and playing games, they have pain "in the stomach", particularly on the right side, it is probably a case of appendicitis, and therefore, running games must be eliminated.

If you would ask me what three items mentioned in this article would more than any other tend to reduce serious illness, and therefore, reduce the number of calls for the doctor, I would say, first, **Don't let the sick or near sick child go to school;** second, **avoid purgatives in the presence of "pain in the stomach";** third, **correct malnutrition.**

In conclusion, we would like to say that it is our opinion that if the teacher and the parent apply the suggestions here outlined, fifty per cent of the doctor's time usually given to the care of sick children can be saved, and without detriment to the health of the child. This is no time for indifference to health. It is the patriotic duty of the home and the school to join hands in conserving the health of the school child, and in this way, contribute their part towards meeting the serious shortage in medical service on the home front.

Prevention Of Home Accidents

By RUTH COUNCIL, R. N.

Consultant in Orthopedic Nursing
North Carolina State Board of Health
Raleigh, North Carolina

THIS article is written with an earnest desire to reduce the appalling number of home accidents in North Carolina. Statistics reveal that this is one of our major problems,

not only in our own State but in the country as a whole. Home accidents are on the increase, the 1940 U. S. figures being 32,500. Figures sometimes are meaningless, but to

say that in 1940 in North Carolina alone, there were 329 deaths due to falls and 165 accidental deaths from burns should certainly be of interest to every person in our State. In addition to the fatal home accidents which are reportable, there are many crippling conditions seen in our clinics and homes. These are the result of one of the hazards which more than likely could have been avoided. The prevention of accidents is the responsibility not only of the professional group but of every individual.

When we think of home accidents, there are a number of conditions which come to our minds. I shall not attempt to enumerate all of them, but will mention those which have come under my own observation and which are considered our chief problems. These include falls, burns, explosions, mechanical suffocation, drug poisoning, and snake-bites.

Falls may be due to dark stairways, stumbling over objects on the stairway, or defective steps with no railings. Dizziness, fatigue, or poor vision are also contributing factors. When climbing stairs it is important that the load carried in the arms does not obstruct the view of each step. During a blackout, it is to be remembered that objects such as chairs or tables left in the middle of a room are hazards. This is also true of electric wires lying on the floor. Many falls are due to wet or waxed floors. Any of the above defects or conditions may result in a sprain, a bruise, a strain, or even a fracture. The latter frequently occurs in the aged, and many do not recover.

Another concern is the problem of burns. In addition to the appalling number of deaths, there are people of all ages who are burned so severely that they suffer for months. Besides the acute pain, these patients not only lose a lot of time from school or work but are cripples for life. If the burn happens to be in the region of a joint, contractures may result.

In studying the causes we find that mothers have left the infant in a crib too near the fire. Children have received fatal burns

in this manner. It only took a few seconds after the fire popped on the bed clothes for the entire bed to be in flames. What a horrible thing to happen and how much easier it would have been to have left the crib away from the fire and provided a screen at the fireplace for protection. Just a few days ago, I heard a mother tell the story of her own mistake in setting a tub of hot water on the floor and an instant later her young child fell into the tub. Although not fatal, the burn was severe, and the little fellow suffered intense pain. Other causes of burns are hot grease or jelly accidentally dropped on the skin, hot ashes under the wash pot in the yard or cooking utensils too near the edge of the stove. Matches are a menace and should be kept in a covered container. They may be an invitation to children, so need to be kept out of their reach. Should the child decide to experiment with a match, the result is evident. The habit of smoking in bed is most dangerous. Recent statistics reveal that severe burns have been caused during the canning season from explosions of hot fruit jars. There are other explosions which are the result of carelessness in handling gas stoves or cleaning fluids.

Another hazard which is not so frequent but needs consideration is inhalation of fumes from a car. Therefore, when the motor is running the garage doors should always be open and as little time as possible spent inside. In connection with the garage, may I mention the fact that a child may be behind the automobile when the parent is ready to back out. Fatal accidents have resulted from both of these hazards.

The number of infant deaths due to mechanical suffocation is amazing. In some instances the baby had slipped between the bed and the wall while the mother was out of the room; in others, the infant was sleeping between the parents, and one of them rolled over on the child. Still others were smothered with heavy bed clothes or crawled to one end of the bed and accidentally slipped between the bars of an iron bed, the head becoming fastened.

Another type of home accident which may result in death is poisoning. I am thinking particularly of drugs left within the reach of children or unlabeled bottles which may result in giving or taking something poisonous. I recall an example of a mother who gave her little girl a teaspoonful of tincture of iodine instead of cascara. The color was similar, so without reading the label carefully, the iodine was poured into the spoon. I remember another patient, an adult who carelessly dissolved some Bichloride tablets in a drinking glass, expecting to use this solution for treatment during the day. The mixture was left in the kitchen, and when she went in a few minutes later for a drink of water forgetting the poisonous tablets drank the solution. She reported this to neighbors and asked to be taken to the hospital. But it was too late! Drinking glasses were not made for poisonous drugs! Other examples of poisons are the household disinfectants such as creolin, lysol, household ammonia and lye. These are frequently left within the reach of children.

In some of our areas, particularly rural, snake bites should be included in our prevention program. It is well for every parent to be informed on the preventive aspects of bites as well as understand first-aid measures to be used immediately. The doctor may be miles away, so the time to his office or to the hospital may be too long to wait for early treatment. However, this first aid does not take the place of hurrying to the family physician, as his treatment will be more permanent. A parent's forethought may save the child.

There are a number of other accidents which may occur in the home such as cuts, nail punctures and gun-shot wounds, but I only mention these. However, every effort should be made to prevent all three. Public Health has gone a long way in the control of disease and it is my belief that although there is need for continued effort in disease control, that in the near future more emphasis should be placed on the prevention of home accidents. In the meantime, as individuals

could we not be thinking along these lines and through education, teach prevention in our homes, in our schools, and in our clinics? Could we not make more radio talks or use our local newspapers for this purpose? Many of our doctors are going away and we as nurses must do our part in helping with such a program.

I am offering the following suggestions to those interested in preventing home accidents. I am confident that if we all work together and become "preventive conscious", we will not only reduce our death rate but prevent a large per cent of the crippling conditions due to these accidents.

First, in preventing falls, see that stairways are well lighted, that no objects are left on the stairway, and if steps are not secure have them nailed. Avoid wet, freshly waxed floors or grease spots on floor. Keep rugs turned down flat and furniture or electric wiring in places which are not considered hazardous. During blackouts, sit still if necessary, to prevent falling over a chair or electric cord.

If we are going to prevent burns, keeping matches out of the reach of children in a closed jar is of extreme importance. May I urge that parents who do not already have a fire screen, consider this an essential piece of household equipment by winter. I realize that screens are expensive, but they may be made at home at very little cost. Wire is difficult to find just now too, so I suggest that those who are anticipating making a screen, get the wire as early as possible.

To those mothers who use the wash pot out of doors, it would be so easy for them to cover the hot ashes with water or wet sand before the little boy or girl falls into them. During tobacco-curing season, the same precaution should also be taken. Care in moving hot gravy or grease is also essential. Oil rags or mops should not be kept in a closed closet. A spontaneous combustion may result. Cleaning fluids must be kept away from the fire.

If cases of suffocation are to be decreased, it will be necessary for us to teach the importance of infants sleeping in separate beds,

not with their parents, and to teach the dangers of leaving babies on adult beds after they are large enough to move around.

In preventing poisoning, I think of encouraging mothers to keep bottles plainly labeled; also to read labels carefully more than once before pouring the medicine and keep all medicines out of reach of children. It is important too that poisonous drugs are never poured or dissolved in a container used for drinking or eating purposes.

Sometimes in talking with mothers regarding any of the above preventive measures, the answer has been, "Well it has never happened yet!" So our responsibility is to help them understand that after the accident happens

it is too late. Why not prevent the loss of a little life, or a long term illness due to a home accident? I am confident that a large per cent of these can be prevented if this particular phase of our prevention program is given more thought. Perhaps an organized effort to secure more complete information regarding these accidents would help the local communities become preventive conscious. Also radio talks, newspaper publicity, or posters in our clinics may help the individual parent give this subject more consideration. Education is the only hope.

I offer this as a challenge to every reader of THE HEALTH BULLETIN.

Save The Scraps To Scrap The Axis

By WILLIAM H. RICHARDSON

North Carolina State Board of Health
Raleigh, North Carolina

IN the August issue of THE HEALTH BULLETIN was an extract from a letter from Major John W. Roy Norton, U. S. Army, formerly of the staff of the State Board of Health, now with our European forces. He wrote:

"Print a good article on prevention of waste everywhere. The old habit of leaving some on the plate for good manners should be scotched. The regular field ration has been cut and will be cut more, I'm sure, and the civilians are shorter. If one has a heart, he can't walk along seeing little children and babies, pregnant and nursing mothers who are definitely short on many things we've been considering essential—and not determine to do all he can to stop the prevalent waste of food among Americans, here and there."

Since crossing over to the other side, to the hemisphere in which this war actually is being fought, Doctor Norton has come face to face with stark realities. From curtailment in

the British Isles to starvation in Greece, the panorama is one which should be visualized by all of us who have been accustomed to having all we wanted when we wanted it. We cannot enter into the fellowship of our allies' suffering until we bring ourselves to the point of self-denial for humanity's sake. There is, however, a stop-gap between plenty and real want, and that is conservation.

By practicing frugality, we may not only provide more for those to whom it is our duty to send supplies, but help ourselves, as well. The crumbs that have been falling from America's table of plenty each year have been sufficient to feed hundreds of thousands more.

We have two duties to perform—even three: To see that our armies overseas are well-fed, to aid in feeding those whose soldiers are fighting alongside our own, and to keep our own nutritional standards at such levels as will enable those on the home front to keep supplies flowing in an ever-increasing stream.

As this is being written, there is rising talk of a second, or Western European, front, to relieve the pressure on our Russian allies. Regardless of when and where this new theater of war is established, it will but add to our solemn responsibilities here at home, where the pinch must be felt for the squeeze play that is expected to hasten the conclusion of this, the bloodiest of all wars.

There has been a growing demand not only for the conservation of all waste material but also for the judicious use of what we are pleased to call the bare necessities of life. Japan was equipped to wage war on us largely through the utilization of waste material that was sent from the United States in time of peace. But to brood over that nemesis now will not stand us in stead with the actualities of war upon us. There is a lesson in it, though. In the first place, it must never happen again. In the next place, we must learn to utilize waste material, even as these slant-eyed barbarians of the Orient long ago learned to use it. The Japanese accepted lower standards of living in preparation for this war. We must accept lower levels in order that the war may be successfully prosecuted.

Now what has all this to do with public health? This is a pertinent question, and the answer is simple. Food is the basic necessity of any individual, group or nation. Therefore, it must be conserved through the exercise of all the wisdom we possess.

No one is in a better position to play a leading role in this undertaking than the housewife. Hers remains the prerogative of seeing that the table is properly supplied with nutritious food. She, in most instances, does the buying—and there is an art in buying food as well as in the proper preparation and conservation of what is purchased. From various sources bulletins are available which teach housewives how to save on buying cuts of meat and other necessities. Meat is necessary for a balanced diet, and a balanced diet is necessary if we are to enjoy good health. Not a single scrap of meat should be thrown away.

Every ounce should be put to some use. Back in the old days these scraps were kept in a special container. Then came soap-making day, when a fire was lighted under the big pot in the back yard; lye was added, the ingredients were boiled and this meant line after line of snowy white clothes. With a possible scarcity of soap in the offing, this old-fashioned practice might well be resorted to as one means of helping to win the war.

Formerly, many spoiled scraps were put into the garbage can. In this day of refrigeration and sterilization, there is no need for this. Cold and heat are splendid preservatives.

Most families who enjoy from moderate to "comfortable" circumstances now possess modern refrigerators, an ever-increasing number of these being electrically operated. Electric current is one of our cheapest commodities. Many families now operate lights, radios, fans, washing machines and all the other electric appliances for what they formerly paid for ice.

An interesting article recently was put out by the Connecticut State Department of Health, in which it was pointed out that:

"The best temperature for the growth of most disease germs is usually within the temperature range of the human body. Some of these germs can live and produce their harmful poisons over a much wider range of temperature, but below 40 degrees Fahrenheit they do not multiply but tend to die out. Those bacteria responsible for the decomposition of food may increase slowly at low temperature in some instances, but unless there is prolonged storage the bacterial increase is negligible and in general without adverse results.

"The ordinary household refrigerator cannot be relied upon to keep food indefinitely. It is, however, a valuable means of preserving foods for reasonable periods of time. This is especially true when refrigerators are regulated to maintain temperatures below 45 degrees F.

"Milk and other perishable foods placed promptly in a cold atmosphere and kept there when not in use usually show no appreciable change in flavor or composition for some

time. Now that alternate day milk delivery is customary in many communities, housewives should make sure that the two days' milk supply reaches the family refrigerator promptly and does not remain on the doorstep. It is also a good plan to refrigerate cream and custard filled pastries after they are prepared and at all times when not actually being served.

"In addition to the preserving effect on foods kept at low temperatures, it should be remembered that certain vegetables, fruits and meats are made more palatable if they are chilled and served cold."

To insure its preservation, perishable food should be cooked as one way of avoiding waste. Cooking, of course, means sterilization. Cook it and preserve it in the refrigerator, even though this course may remind us of the Chinaman's observation that Americans are a "queer people", in that they boil their tea to make it hot, put lemon in it to make it sour, use ice to make it cold and sugar to sweeten it.

Heat, as well as cold, is an enemy to germs and deterioration.

Formerly, the pile of discarded matter was, in some instances, larger than that retained for human consumption, but we have learned that many things we used to throw away are not only palatable but healthful, including beet tops as an example of what can be saved to advantage in the realm of wholesome vegetation.

Apple peelings, peach peelings and many other parings can be utilized to make jelly. Scraps of meat help to make a fine soup mixture, and so on—but the reader already has caught the idea.

The moral of this article is: **Waste nothing** that can be utilized for home consumption or that can go into materials that will help the United Nations win this war for survival. And if we will use our heads properly we will find that we can not only do without many things we formerly considered necessities, but that we can utilize many things which we formerly regarded as useless. We might well carry the lessons we are learning in this war to the period of peace for whose advent we look with confidence.

Off The Record

By R. D. WRIGHT, M. D.

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AMONG the tedious things of life Shakespeare might well have put, along with a smoky fireplace and a railing wife, records. Dislike for records is not a prerequisite to the study of medicine but it is undoubtedly its most constant companion. Nor is this affliction confined to the practitioners of medicine. It is shared by all the members of the tribe of homo sapiens. Indeed, it is a characteristic of the simian world to live for today and forget the yesterdays. Only man among the anthropoids has taken on the yoke of records and through their tedious

tending has built what he calls a "civilization". Whether it be medicine, the law, science, or meditation, records are the stout cord that binds the experiences of the past to the job at hand.

With a few notable exceptions, great minds have been great record keepers, and even those exceptions prove the rule that records are the life blood of our progress. Socrates wrote no books, but we know Socrates now because his pupil, Plato, did, Christ did no writing, but Paul did a great deal. In science, Aristotle, Da Vinci, Pare', Pasteur, Koch, and

a thousand others filled notebooks by the score.

Records are not reserved for genius. Every job from cooking to venereal disease control is better for records. The exact proportions of a recipe are better kept on a record than on a memory. The treatment received by a thousand patients can be remembered no other way.

To be useful, records must be explicit and legible. This is especially true in medicine, where the omission of a word may mean death or an epidemic. There was a time when doctors wrote down a diagnosis of syphilis with the one word, "Syphilis". In fact, there was a time when all men signed their names with one word. It was only because William the Conqueror was interested in records that man got two names. When William conquered England in the year 1066, and he was the last to conquer England, he undertook the first systematic recording of legal procedure in history. Every court case was recorded in minute detail. But William quickly ran into trouble. At that time men had only one name. Each was either Hannibal, or Cato, or Homer, or John, or Richard, Mary, Anne, and that was all. There were too many Johns and Annes to keep the records straight, so William the Conqueror required all his subjects to take a second or surname. We have done the same thing with the diagnosis of syphilis. It will be recalled that the hero of Fracastoro's poem was the shepherd, "Syphilis", after whom the disease gets its name. Today there are too many plain "Syphilises", so to keep the records straight we classify them with a second name: Primary Syphilis, Secondary Syphilis, Early Latent Syphilis, Late Syphilis, and so on, depending on the stage of the disease. This is absolutely necessary if the record of the case is to be safe and useful. The dose of arsenic necessary for the treatment of Primary Syphilis may be the "cup of hemlock" for Late Syphilis. The promiscuous female with secondary syphilis may produce an epidemic of syphilis among her contacts if the emergency nature of her illness is buried beneath the ambiguity of an

incomplete diagnosis.

There is another important aspect to records too often overlooked. Some records I have seen recall to mind the Rosetta Stone, most celebrated of all the records in history. It seems that the Egyptians were among the first to discover the use of the written word. They worked out a system of hieroglyphics, or picture-words. The word "man" was a crude picture of a man. The word "child" was a picture of a small man sucking his thumb. The word "go" showed a man walking to the left. The word "come" showed a man walking to the right, and so on. As men got more and more ideas to record, and as the language got more complicated, the scribes began to simplify the characters. The word "go" was reduced to a pair of legs and feet traveling left. "Come" was the same traveling right. "Give", which had been a man holding out a cake, became an arm and hand holding out a cake. Later on "give" became only a line with a curlicue on the end of it. Eventually, there was hardly a resemblance to the original characters so that archaeologists could make neither head nor tails of the hieroglyphics of ancient Egypt until Napoleon's Egyptian campaign of 1799, when an engineering corps excavating a trench near Rosetta, Egypt, unearthed a large slab of basalt rock covered with an inscription in three languages. One of the engineers was enough of a linguist to realize he had found something important. The stone was preserved and shown to be an inscription in Greek, Demotic, and Hieroglyphic dating from the reign of Ptolemy V and his Queen, Cleopatra.

With this key the story of ancient Egypt was unlocked.

Records are useful only when they are decipherable. I fear that some of the venereal disease records I have seen will require a Rosetta stone or two before they can be useful to the clinic. Let us hope that those scribes who make innovations in the written word will furnish the necessary stones.

Only with accurate and legible records can we "defy the tooth of time" and fulfill our pledge of public service.



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No. 10



ALLEN JONES JERVEY, JR.
1911-1942

*First North Carolina Health Officer to be Killed
in Action in this War*

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care, The Prevention of Infantile Diarrhea.	
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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Notes and Comment

By THE ACTING EDITOR

RUTHERFORD AND POLK

WE can lift up our eyes into the hills in Rutherford and Polk Counties and receive reassurance. In them dwells a spirit which we believe to be characteristic of America.

From August to December 31, 1940, Dr. A. J. Jervey, Jr. served as acting health officer for the Rutherford-Polk Health District, resigning to become a member of the Medical Corps of the United States Army. Dr. Jervey, a member of a distinguished medical family of the two Carolinas, although a health officer for only a short time, won the respect of veteran health officers, the admiration of his fellow workers, and the gratitude of many to whom he extended a helping hand. In the service of our country he gave the last full measure of devotion. His friends were shocked and grieved to learn of his death so tersely announced in the August 8, 1942 issue of the *Journal of the American Medical Association*:

"Allen Jones Jervey, Jr., Tryon, North Carolina; Medical College of the State of South Carolina, Charleston, 1939; was appointed a first lieutenant in the medical reserve corps of the United States Army March 1, 1941; formerly district health officer for Rutherford and Polk counties; age 30; died somewhere in the Pacific, June 17, of gunshot wounds."

Dr. Herbert A. Hudgins succeeded Dr. Jervey as Health Officer and served with

credit to himself and the cause of public health until June, 1942, when he, too, joined the armed forces of our country.

As health officer for the Rutherford-Polk Health District, it is fortunate that Dr. B. E. Washburn could be induced to return to active service. If an adequate book of Dr. Washburn's life were written, it would be a typical success story. Born on a Rutherford County farm when in the South poverty was universal, Dr. Washburn had to struggle valiantly to secure his education. Early in his professional career he helped with the hookworm campaign in North Carolina. He did his work so well that he was soon a trusted member of the staff of the International Health Division of the Rockefeller Foundation. In 1917 the Foundation loaned Dr. Washburn to the North Carolina State Board of Health, that he might serve as director of the Bureau of County Health Work. In this capacity he helped to lay the firm foundation upon which has been built the present structure of local health work in North Carolina. On January 1, 1920, the International Health Division sent Dr. Washburn to Jamaica to take charge of their health program there. The West Indies claimed the fruits of Dr. Washburn's endeavors for the next twenty years. Only infrequent visits to North Carolina were possible during this long period filled with signal accomplishments. These years of service qualified Dr. Washburn

for retirement. Returning to the State and County he loved, his home was again on the farm upon which he was born. He added acres to those which he had cultivated as a boy. Pastoral life with his fields and his flocks seemed to be the well earned reward of a life of service to mankind. His continued interest in public health was manifested by his acting as health editor for the *Progressive Farmer*. It is no small sacrifice for a man who has tasted of the pleasures of earned leisure to forsake the comfort of his easy-chair and again become an active worker as health officer. But Dr. Washburn was a Rutherford County man and a health worker at heart. Rutherford and its neighbor Polk needed him; public health needed him—he responded to their need. Thus we have in the lives of three men from the rugged mountains of North Carolina an inspiration and an assurance that the qualities of courage, sacrifice, high service and devotion to duty still exist in the hearts of Americans.

* * *

HEALTH DEPARTMENT SECRETARIES

There are veteran health workers who can remember when in the average county that claimed the distinction of having an organized health program, the health officer was the only employee. This physician needed help. The nurse was the trusted assistant to the doctor. Inspections were called for and we had sanitary inspectors, sometimes called sanitary police. All are now getting special training for their work and have become the modern health officer, the public health nurse, and the sanitarian. No health officer must now serve without a health secretary. The minimum qualifications for this young woman are those which would be expected of any office worker. But if the health program does not inspire her to be more than a good stenographer, a good typist, or a good file clerk, she is not the typical secretary which we have seen from one end of the state to the other. In the county health department with the staff generally engaged in field work, the secretary is frequently the

only one in the office to greet the people who come to it. Those people are sufficiently interested in health work to come to the health department office. These people may be seeking information but are more likely to be there to report some nuisance or file some complaint, but whatever their purpose, they are there because they have interest in something which they think involves health. The secretary thus has an opportunity to make of these visitors either friends or enemies. The same opportunity offers itself when the secretary answers the telephone. If she can give out information in an intelligible and courteous manner, she has secured a supporter for the program. If she is antagonistic or combative in attitude, is stupid in answering questions or does not seem sympathetic, she has created an opponent who should have been a friend. A secretary can be a great help in the making of a successful health department. She can break it almost by herself.

There are many other ways in which a good secretary can contribute in advancing the health program. She may not be called upon to make health talks, but she can do much for health education. She, better than anyone else, can compute rates, prepare tables, charts and graphs, and make spot and pin maps. A graphic display of local information almost never fails to attract thoughtful interest. A map of the county, showing the location of patients who now have typhoid fever, malaria, or tuberculosis, will be more interesting than a map of the United States showing the incidence of these diseases some four years ago. A graph showing decline in the prevalence of diphtheria in the county will be more interesting than a story about diphtheria in New York. The new secretary may not know how to compute mortality or morbidity rates; she may never have prepared a graph, or made a spot map, but the health officer will find it easier to teach her these procedures than to do the work himself. It is work which needs to be done. After a little training and experience the secretary can do it well. Another important item to health

education is the printed page. A secretary by being on the alert for free pamphlets, booklets, etc., and by being familiar with their contents can place the proper information in the hands of those who need it. By keeping health publications displayed attractively she can advance the cause of public health education. There are a multitude of ways in which the health secretary can perform service outside the terms of her contract. Mrs. Honeycutt has recounted many of these in her paper published in this issue of the BULLETIN. She, an experienced secretary, represents the type of secretary who is in fact a professional health worker. Veterans in the ranks welcome these new recruits and predict for them a gratifying future.

A differentiation might be made here between a secretary and a stenographer. A stenographer works with words and a secretary with people. Shorthand and typing are the tools of the former and people those of the

latter. Therefore, it is well that a secretary should like people and be liked by them. If she is liked, people will recall her friendly, courteous, and cheerful manner, her intelligent consideration and her smile. It is her job to create a good impression; to establish and maintain friendly relations. The role of public health secretary calls for tact and diplomacy in dealing with the various groups and individuals.

In one sense, the smooth functioning of the entire department depends upon the efficiency of the secretary. Therefore, the secretary is of vital importance to the public health program. Efficiency of the secretary means quick and accurate handling of all details of office routine, courteous contact with the public and with other workers in the department, and the performance of all work in a professional manner with a deep consciousness of responsibility toward the health of the community.

A Health Department In Action

Quarterly Narrative Report Covering the Period

April, May, and June, 1942

for the

Rutherford-Polk Health Department

THIS has been a period of extraordinary activity with many journeys from the home base in search of knowledge, and several changes in the general scheme of things.

In May, during the Charlotte meeting of the Public Health Association, Dr. Hudgins, the health officer who held a captaincy in the Medical Reserve Corps, was called to active duty in the Army. In the few days left for duty here, Dr. Hudgins called the two boards of health together and in the meeting Dr. B. E. Washburn, retired from the Rockefeller Foundation, was elected health officer. He will serve during Dr. Hudgins' absence, and took over his duties as health

officer on June first. Miss Virginia Wall joined our personnel on April 15, replacing Miss Eugenia Twitty who resigned February first. Miss Thelma Costin served as public health nurse in Polk County during the period in the absence of Mrs. J. E. Jackson who was attending school, for three months. Mrs. Jackson resigned before completing her course, and Miss Costin is still with the Polk County unit. A venereal disease follow-up worker was employed at the end of the last quarterly period and has been of much value in regulating clinic attendance and rounding up draftees for treatment.

Major achievements during the period have been:

1. The completion of pre-school clinics.
2. Planning and conducting the usual summer vaccination clinics and distributing posters advertising this campaign throughout the area.
3. Eye clinic for school children in May.
4. Orthopedic clinics, one in April and one in June.
5. Classes in First Aid and Home Hygiene and Care of the Sick. The health officer taught first aid to a class of Auxiliary firemen and policemen. The supervisor taught three classes in Home Hygiene: one a class of high school girls, one composed of members of women's clubs, and one a class made up of women in a rural district. The three classes included forty-five pupils. The examination for the rural class could not be written but was done by handicraft projects with prizes offered to those who excelled. Mrs. Pearl, Polk County nurse, taught a home hygiene class to a group of negro girls. All these classes were under the direction of the Red Cross.
6. A conference in Charlotte concerning the Saluda Seminar attended by the health officer, supervisor, Miss Mabel Patton, Doctors Makepeace, Lawson, D. L. Smith and Oren Moore.
7. Conference on Gonorrhea conducted by Doctor Pelouse and attended by the follow-up worker and two nurses.
8. Orthopedic conference attended by the supervisor and three nurses.
9. The supervisor attended a three weeks course in Venereal Disease Control held in the School of Public Health in Chapel Hill.
10. Completion of an up-to-date abattoir near Forest City, a project which required much time and effort on the part of Mr. Lynn, sanitarian. Cattle will be inspected before being killed and meat will be examined afterward by a licensed veterinarian.
11. The erection of an incinerator in Lake Lure to dispose of the garbage of that community.
12. Mosquito control measures carried out in three areas in Lake Lure.
13. More than 50 new septic tanks built to replace privies.
14. Stimulating new interest in sewage disposal for rural homes and the adaption of a new type cement fixture which will be manufactured and sold at a reasonable cost to rural home owners.
15. Attainment of Grade A by 10 new food handling places.
16. Visible improvement in sanitation in markets, dairies and cafes.
17. The inauguration of a more thorough examination of food handlers, cooks, nursemaids and house servants.
18. A tonsil clinic at the Rutherford Hospital with plans to continue these through the summer.
19. Much improvement in the Saluda clinic and plans for a similar clinic to be held each month in Lake Lure. This will be an immunization center, M and I center, V. D. Clinic and general clinic. The gas and tire shortage makes it difficult for people in the outlying districts to attend office clinics and it may become necessary to establish more clinics in the field.
20. X-ray of several patients suspicious for tuberculosis with discovery of new cases who were admitted to the sanatorium or placed under home treatment with nursing supervision.

The following are excerpts from weekly narrative reports required of the nurses in both counties:

Myrtle M. Pearl:

"This was happiness and this was sadness." Last Wednesday night Doctor Preston and I were called out on a delivery. The home, patient and supplies were immaculately clean and in readiness for us. The mother got along well and delivered a beautiful 9½ pound baby boy. This was happiness.

Thursday night Doctor Jersey and I were called. The rain was pouring. We were in a hurry to get there as the mother's condition had not been good during the whole pregnancy. B. P. 180, 110, edema, etc. She lived

one mile off the highway. We thought we could get over the road but just as we turned, we were stuck. The rain was still pouring and there was nothing to do but walk, so carrying our heavy bags we started—mud over our shoe tops, rain pouring. The only happy thought was that maybe we were going to save a life. When we finally arrived we found the mother in active labor. We hurriedly prepared. A little tiny baby—cyanotic, too weak for even a bath—badly deformed, both little feet clubbed and head deformed. Mother's condition poor. B. P. dropped to 70/0. Our hearts were heavy. We knew we could not save the baby. This was sadness. Still life must go on—one day happiness, the next day sadness. Through it all we must feel that our efforts to help humanity are not in vain.

During the week I made several postpartum calls and was delighted to find all new mothers and babies doing well. Mothers were keeping babies on regular nursing schedules, giving plenty of boiled water between nursings as directed. Also some babies three weeks of age were getting their first orange juice and cod liver oil. It is very satisfying to find these new mothers interested in knowing how to give their babies better care. Also thinking of their own health by staying in bed ten days, keeping their breasts clean and reporting for postpartum examinations and birth control advice when necessary.

Last week we admitted one of our little orthopedic patients at St. Luke's hospital for treatment. A very sad case of malnutrition. The child is two years of age and weighs only ten pounds, two ounces. I feel very bad about this case as I had not gotten into the home until our orthopedic clinic, thinking she was only an orthopedic case. We had a very good M and I clinic at Cooper's Gap . . . found one baby to have bronchial pneumonia. A few complications on deliveries . . . one mother retained the placenta one hour and thirty-five minutes. One prize baby weighed 10½ pounds. Her clothes were too small. Home Hygiene class work is coming along nicely. Two of these young negro girls want

to study midwifery. I hope we can get some young ones interested and trained well as the need is great. All and all, work is very interesting and I am glad to have the opportunity to be connected with the county.

Thelma Costin:

I visited Mrs. John Doe Wednesday. She is pregnant. Her blood pressure is too high and Hbg. too low. She doesn't believe in medicine and says her husband doesn't. I tried to persuade her to come to clinic. She says her husband will not let her and she does not have time. She has a son who has been blind since he was six years old, following measles. He is a Cretin. Evidently, I made an unsuccessful approach because I had no response except offer of pay for my services.

The clinic at Mill Springs was very good. I was gratified to see my postpartum cases come in for examination. It was also gratifying to see Mrs. . . . bring her children in for toxoid as she had told me she'd much rather have them vaccinated at home.

I visited Sue Roe's home in an effort to get blood tests on the children. There was no one to help hold them so I asked Monroe to bring them in to clinic, and this he promised to do. This is one of the dirtiest places I have ever seen. The straw mattresses were on the floor. The flies must have gathered from miles around. I don't see how even syphilis could stay in a place like that.

I was surprised to learn that the Baptist minister had called Mrs. . . . (nurse) in regard to the morals of Mrs. Roe and her daughter. I didn't know this was a public health problem. Mrs. . . . told him that was something he could probably do more about than we could.

I spent a very quiet week-end—no deliveries! I succeeded in finding Patsy Crawford, midwife, Monday afternoon. She was looking for her certificate. She finally handed it to me—it was an application blank for a mattress! She has been sick so I suggested that she come in for a general check-up and to get eye drops as she didn't have any.

I was quite shocked to find one of my patients, with tuberculosis of the glands, in school. He lives with his grandmother, an elderly colored woman who strongly objects to sanatorium treatment. She is sincere in her belief that Jesus will heal him. However, she was using antiphlogistine on the ulcers! Mrs.

....., a primipara, kept us rather busy... she gave birth to an eight pound baby girl Friday morning at 3:30 A. M. The home was unkept—beds were not made and the house in need of repair. All the family were very excited, seldom leaving the room except upon request. Later in the night sleep overcame most of them and they left us in peace. Mother and baby are doing nicely.

The husband of Mrs. Robert Jolley, who was delivered Friday, was on Corregidor. Dr. Preston took the money she used to pay him for the delivery and bought the baby a Defense Bond.

Florence Haire:

My major problem was that of securing a doctor to deliver a baby for an indigent family. This case was referred to me by the Farm Security Office, and the father. When the home was visited I found an unmarried girl 17 years old who was pregnant and due any time. She had not been seen by a doctor nor had plans for a delivery been made. Blood pressure 160/120 and two plus albumin. Her feet and legs were swollen. Their family physician refused to take the case due to her condition and also the lack of funds to pay her bills. I contacted the welfare department and after much talking I succeeded in getting the superintendent to go with me into the home. Then she provided funds for the doctor. The mother was delivered June 2nd and she and the baby are both all right.

I have sent three children and three adults to the hospital for X-ray of the lungs. Two adults were found to have active tuberculosis. The white woman was admitted to the sanatorium within one week, but was unable to get a vacancy for the negro woman. However, she is in bed at home and cooperating very well. Arrangements are being made for her to enter the Rutherford Hospital for a

crushing of the phrenic nerve so she will benefit more from her stay in bed at home.

I had four new cases to attend the orthopedic clinic. Applications for admission to the orthopedic hospital were filled out for three children and they plan to enter in the near future.

I visited schools and examined children for defective vision and gave appointments to 23 of these to attend the eye clinic. I filed application for 2 negro patients to be admitted to the tuberculosis sanatorium and succeeded in obtaining a contribution from an outside source to finance one of these cases. I assisted the Home Demonstration Agent in examining 4 H Club boys and girls. This was quite a job but I feel I learned a little something about the needs of our school children. I realize the great need of a more extensive dental program in our schools and the need for more teaching of personal hygiene and good health habits.

I have been doing quite a bit of work in the Urce section and trying to create an interest in an M and I center in that area. I think that with a little more time, I will be able to open a clinic that will be well attended and successful. At least, that is my goal.
Virginia Wall:

I joined the staff of the Rutherford-Polk Health District as a public health nurse on April 15, and assumed the responsibility of health education in the eastern half of Rutherford County. This includes Forest City, Ellenboro, Bostic, Sunshine, Golden Valley, Alexander Mills, Caroleen, Avondale, Henrietta and Cliffside. A generalized program is carried on in this district. The territory was so new to me it was some time before I could start out from Rutherfordton in the morning with my day's schedule in my hand and a map of the county, and return in the afternoon without getting lost. I learned how very important it is to give adequate directions and landmarks when making out a family folder.

All my cases are very interesting; therefore, it is very difficult to choose one for description. One is an orthopedic case—a congenital double clubfoot. The baby was born in April,

1942. The father of the child is in the army and on my last visit, the mother did not know where he is located. The baby, Jimmy Hill, who lives with his mother and grandparents, was five weeks old on my first visit. He was a well-nourished baby and I advised the mother to start cod liver oil. I told the mother about our approaching orthopedic clinic, as she had been told the baby would have to be 6 months old before anything could be done for him. She thanked me for suggesting the clinic. As it turned out, Jimmy has casts on both feet to the knees. These were put on in the clinic here in June and are to be changed every two weeks in Asheville. The mother has the doctor's assurance that the deformity will be corrected within one year.

During the past month, we have completed a round of vaccination clinics. They were held in different sections of the county for two days a week.

Shortly after I assumed my duties and was beginning to feel I "belonged" to the health department, we had to give to the army our able and efficient health officer, Dr. Hudgins. This stunned us for a while but we were soon in harness again with Dr. B. E. Washburn at the reins, guiding us over the rough spots like the veteran he is. I have enjoyed every minute of my work with the health department and I do not believe there is

another health department or district anywhere in which every one from the health officer to the clerk has but one object and goal in mind, and that is to make the world a healthier and happier world in which to live through health education. We are all health minded!

COMMENT:

The comments from the nurses' narrative reports are extracted impartially and used to describe some of the scenes behind the statistical reports. There is no better way to discover each employee's attitude, enthusiasm and earnestness than in these accounts, written with thoughtfulness and during periods of relaxation. The objectives and achievements of a public health unit depend on the above-mentioned qualities of every employee. To understand the real growth and professional progress of an organization of this kind, it is well to know something of the home by home and individual by individual struggle, with the gains made inch by inch through teaching and demonstration. Public health will continue on the up-grade so long as the employees feel their responsibility toward the inmates of every little shack, every school room, every clinic center, and at the same time, keep in mind the entire picture of what the health service is attempting to accomplish.

B. E. Washburn, M. D.

Helping Mothers and Children

By GEORGE M. COOPER, M. D.
Director, Division of Preventive Medicine
Raleigh, North Carolina

AS Director of the above named division of the State Board of Health for the past eleven years, we wish to set forth in simple language some of the problems that we have encountered and a little bit of the progress, we hope, which has been made.

The work of this division embraces the Maternal and Child Health Service work of the Board and the Medical Directorship of the Crippled Children's Work. There are

several other jobs and departments in this division but this article will be restricted to a discussion of the work relating directly to the welfare of women and children in North Carolina.

During the last year for which we have been able to publish accurate reports, which was for the year 1940, North Carolina had the highest birth rate of any State in the Union except Arizona, Mississippi, New Mex-

ico, South Carolina, Utah, and the District of Columbia. It also had the highest infant death rate (meaning death in the first year of life) of any State in the Union except Alabama, Arizona, Colorado, Georgia, Louisiana, New Mexico, South Carolina and Virginia. Only the seven big States of California, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas recorded a total number of births in excess of the 80,582 reported as being born in the State of North Carolina in that year, 1940. There were six States, namely, Alabama, Delaware, Georgia, Louisiana, Mississippi and South Carolina, who had a higher maternal death rate than our State.

The foregoing enumeration is simply for the purpose of placing in brief space the picture of the problem which has been faced in North Carolina all the time in trying to make the State as safe place as any in the Union in which babies may be born and live out their first year, and in which mothers may give birth to babies with equal safety to those in other States in the Union.

Since the enactment of the Social Security Laws in Washington in 1935, a proportionate part of money appropriated under those laws has been available to North Carolina. It has been the responsibility of the Director of this Division, acting within policies and rules and regulations laid down by the State Health Officer and the State Board of Health to supervise the expenditure of this money. We want the taxpayers of this State to know something of how the money has been spent and the results which we think have been achieved.

The plans which we have followed have been based on careful study and experimentation in this work throughout the State or certain sections of it, at least for a quarter of a century. In the first place, long ago we found that a very large proportion of the women in North Carolina giving birth to babies were not receiving medical attention of any kind, either during the period of gestation nor at the time of childbirth. To be exact, slightly more than 25% of all the births in North Carolina are attended by

midwives. Roughly speaking, this means that annually between fifteen and sixteen thousand Negro women and between five and six thousand white women never saw a physician during the period except in dire emergency, which was generally too late, until this division inaugurated so-called clinic service on a wide basis throughout the State. Beginning in 1936, an effort was made to extend a service which has been carried on in a few counties of the State for many years to provide the attendance of a physician at a clinic on a monthly basis where expectant mothers who were dependent upon midwives could come for prenatal examination and medical advice. It was also provided that the babies of such women could be brought in at least once a month to similar clinics for well babies in an effort to provide medical advice and nurse service and also to instruct the mothers on how to keep the babies well.

At the close of the last fiscal year such clinics had been established in 73 counties on a more or less permanent basis. There were 308 clinic points in those 73 counties where physicians, including the county health officer and experienced nurses from the staff of the county Boards of Health, are present for several hours at least once a month to examine and advise with these mothers about their own care and that of their babies. An example of the scope of this work may be indicated when it is known that during the last two fiscal years, 201 separate practicing physicians aided in the work on a part time basis, of course. In these clinics 5,091 visits were made by white expectant mothers for the examination and advice expected, and 23,842 visits of colored women were made for the same purpose. These were new patients coming for the first time, some of them coming back, of course, more times than one and of the return visits there were more than 16,000 by white women and more than 68,000 by colored women. During the same period, more than 17,000 visits by white babies and more than 36,000 visits by colored babies to these clinics were recorded. More than 3,000 women received medical attention at child-

birth as a result of this service; 1,506 of them were sent to the hospital for the birth of their babies and given every care necessary. 2,075 of the babies received medical care as a result of being referred for treatment. 782 received surgical operations. This work has gradually grown and expanded, as stated above, until it is available in 73 counties. In counties where the service has been set up, every expectant mother, no matter how poor and a baby in any similar family can receive the advice and medical examination, the nurse service, and the advice and helpful suggestions by attending the clinic available in such counties. Naturally, sections in the county where the need is greatest have to be selected. Health officers have cooperated in most cases and so have their staff nurses in making it possible for central clinics to be held in the health office in the county seat town, in addition to the available clinic elsewhere in the county. Those central clinics open on a specified day and hour every week have made it possible for many hundreds of women and babies to be examined and advised in these clinics.

The secret of success in this work is, first, the absorbing and sincere interest of the health officer, and second and of equal importance, the interest and determination of one or more staff nurses to reach all families in their counties needing this service. Of as much importance as the health officer and nurse interest is the ability, the sympathetic interest and the conscientious service of the practicing physician who consents to help out in this work. Right now we are confronted with one of the hardest problems in that so many of the physicians who have been helping in this service the past two years are now in the military service of the country, and those physicians who are left have perhaps not been as much interested as some of those who are gone, or they are too busy absorbing the practice of their absent fellows, which is making it much harder for the men who are genuinely interested in helping us solve these problems by putting the amount of time and sympathetic attention necessary on this service. We have paid all of them a small honorarium

provided by the United States Children's Bureau, who approve the allocation of such funds for this service. We are doing our utmost to raise the standard of examinations and during the past biennium we have spent several thousands in providing equipment and scientific supplies for many of these localities in the hope that the mothers and the babies would be the beneficiaries.

At this writing we are more encouraged over reports for the first seven months of this year than we have ever been before. There have been reported to the Vital Statistics Department of the State Board of Health for the first seven months, 469 FEWER deaths of infants under one year of age than occurred during the same period the previous year. There were also reported 48 FEWER maternity deaths than for the similar period a year previous. Thus, we are able to record the lowest infant and maternal death rate for the first seven months this year of any year in the history of North Carolina. Naturally, a seven-months period standing alone would not be sufficient evidence to base a conclusion. However, it does show a trend in the right direction, and with the hottest June and July on record in this State, which is always bad for babies, we feel greatly encouraged over the outlook. The fact that so many nurses and physicians and club women and public-spirited citizens of every class are interested in trying to do something to save these babies and to save more women in the childbearing period is assurance itself that we are going in the right direction. It is the hardest work in which any city or county health department can engage. It is the hardest work for the health officer and the hardest work for the nurses, but there can be no doubt that the reward will be greater than in any other service in local health work, provided it is placed on a permanent basis and kept there. It requires 365 days' work a year to make this work successful.

This service cannot go one step further than it will be carried by the practicing physicians who take a hand, by the local health officers and local health nursing staff.

We earnestly hope that the health officers and the nurses will put more and more time and attention on this important program. It is the only way that we can expect in this generation to bring a reduction of the North Carolina infant and maternal death rate down within the national average.

In closing this paragraph, we want to go on record with grateful appreciation to the unselfish service given us by the pediatricians and the obstetricians in North Carolina during these past few years, and especially to a selected number of private practitioners engaged in the general practice of medicine in a few sections of the State.

Work for Crippled Children

The Director of this Division is Medical Director for the Crippled Children's Service. The details of this work are carried out under the immediate direction of a State Supervisor, but all medical phases of the work, which is the most highly technical medical department of the State Board of Health is under the specific direction of the Director of the Division of Preventive Medicine. In our opinion, this work has been highly successful. Children from every county in North Carolina, and we feel when tabulations sometime may be completed that children from every school district in the entire State of both white and Negro children have already had the benefit of this work. Many hundreds of children have been sent to hospitals for correctional defects by orthopedic surgeons, such as children with harelip, clubfeet, and the deformities resulting from poliomyelitis and many other crippling conditions. Many hundreds of such children have been completely cured, their defects completely adjusted and they have been sent back home well and happy.

At the present time, there are eleven orthopedic surgeons in North Carolina, every one of them qualified, recognized specialists in their profession, who have cooperated with us in carrying on this program. A number of hospitals in the State have complete equipment and orthopedic surgeons attached to the staff which have enabled us to provide the best surgical attention available in the

country anywhere for these children of the poor. Literally thousands of braces and shoes and other appliances have been provided for these and other children with crippling conditions. It has been a benefit to all such children throughout the State.

The money for this service, as well as the money for the part time service in the Maternal and Child Health Department has been provided from Social Security funds, provided by the enactment of those laws in 1935, and the funds allotted by the United States Children's Bureau of Washington. Most of the funds are expended on a matching basis, meaning that we have to prove that our own people through public service in North Carolina have been providing an amount equal as available to us from the federal government.

Summary and Conclusion

If anywhere in this State in the 73 counties there is a pregnant woman who does not have the service of a private physician, if there is a baby whose parents think it needs the advice of a doctor or nurse and who does not come to such center or clinic for the purpose of obtaining this service free of charge, it is their own fault. If anywhere in the entire State in any neighborhood or school district there is a child needing the services of the Crippled Children's Department, meaning expert orthopedic examination and advice and hospitalization to follow, if necessary, and who is not getting it, in the cases of such people also it is their own fault or the fault of their more fortunate neighbors who do not inform them of this service which is open to people of the entire State.

"Yesterday's preacher becomes the text for today's sermon."—Thackary.

"We would rather hear about vultures over Berchtesgarden than about bluebirds over the white cliffs of Dover."—Anonymous—Editor & Publisher.

The Role of the Public Health Nurse In National Defense

By BERTHA L. ALLWARDT, R. N.

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NOW that we are talking of war rather than just defense, we public health nurses want to know what we should do. We realize only too well that we can't all wear heroes' decorations nor march in the parade, but we can do the work for which we have been especially trained, do it well and without wavering and give unstintingly of our time and effort to see this war through to its successful conclusion.

But what should we do? Specifically the aims of the wartime public health nursing program, as I see them, are as follows:—

(1) Bend every effort to protect the health of the homes which must supply the armed forces with a maximum number of healthy men, and industry with workers as physically fit for their jobs as possible—realizing that many of these will be women or men from the over-age, under-age or handicapped groups; (2) Carry on a community program that will provide for the sick and injured, thus helping our fighting forces by keeping them free from worry concerning the care of the members of their families, and which will also tend to keep industrial workers at work; (3) Make more and more health education available to citizens; (4) Be prepared to carry on services brought on by the emergency, i.e., first aid, home delivery service, bedside care; (5) Help families maintain morale; (6) Be an example.

Just what do these aims mean from point of view of our regular programs? What will become of the long range programs we started? All I can say is that these are unusual times and call for unusual procedures. Therefore, I believe that now we should: (1) Emphasize group work of all kinds—clinics, conferences and classes,—classes in first aid, home

nursing, nutrition, maternity care and the like; (2) Help the upper-age school groups and the rejected draftees to get remediable defects corrected, and assist those with handicaps to find occupations best suited to them; (3) Vigorously push immunization programs, not forgetting to include ourselves; (4) Carry on aggressive epidemiological work in the venereal disease and tuberculosis programs in order to isolate and put under treatment the communicable cases and thereby reduce the incidence of new cases; (5) Be prepared to help with industrial nursing work, especially in the small plants that cannot provide full-time services for themselves; (6) Assist with first aid and other problems resulting from any disaster that may arise; (7) Consider the possibility of including bedside nursing in our regular health department programs. This may be necessary since, following an incident, convalescent patients will probably be sent home earlier than usual in order to make room for war casualties; more deliveries and premature births will occur in the home and require our assistance and care; and, time off because of illness among industrial workers needs to be reduced to a minimum.

You will be interested to know that at a recent meeting of the state and territorial health officers, the matter of visiting nurse care was given serious consideration by a committee of which Dr. Godfrey of New York State is chairman. The following paragraph is from the report which was adopted by the conference:

"The committee has noted the existing shortage of qualified nurses and the probable inadequacy of hospital facilities. It believes that the deficiencies in both categories are likely to increase rather than diminish. It

follows, therefore, that existing resources should be utilized in the most efficient manner possible. Many hospital beds could be made available for cases needing this type of care, if a sufficiency of home nursing care were provided. Home nursing care on a visiting nurse basis should not only greatly enhance the value of the individual nurse to the community but distribute nursing service more nearly according to the patients' needs. In the opinion of the committee, bedside nursing care is a proper function of a generalized public health nursing service. It should not replace the services usually rendered by public health nurses, but should supplement them. Where a visiting bedside nursing service does not exist, every effort should be made to establish such a service, preferably within an existing official public health agency."

I can hear you ask, "How can we do all this work when we are unable to find trained persons in sufficient numbers to expand our staffs?" I wish I might hold out a hopeful picture to you but the fact remains that there is a shortage of nurses. Consequently, we shall have to study our programs critically and put first things first. In addition, we should give serious consideration to matters concerning personnel. (1) Urge every inactive public health nurse to come back into active service, even if for part-time service only. (2) Study the work public health nurses are doing and see how much of it housekeepers, maids, volunteers, or graduate nurses can do just as effectively. If we relieve public health nurses of the less technical activities, they will be more able to carry on those phases of work in which their special training is essential. (3) There is every indication that we may have to supplement our trained public health nursing staffs with graduate nurses who have not had a formal public health nursing course or experience in public health and that we shall need to train them ourselves in the fundamental principles of public health nursing. I do not mean to infer that we should lower qualifications for public health nurses as such, nor in any way alter the merit system as it effects them. But we may have

to give temporary appointments to nurses who do not meet these requirements. (4) If programs are to be even reasonably successful under these conditions, it will be necessary to develop from experienced members of the staff, persons who can train and direct these workers. The more we dilute staffs, the more supervision and in-service education of the worker becomes necessary. (5) If we want to keep the staff we have and prevent turnover, it is imperative that we adjust our salary scales so that they compare favorably with those of competing agencies.

Now that we are faced with the problem of having so many responsibilities and so few workers, it is essential that we eliminate all duplication, whether it is within our own agency or caused by the lack of cooperation and integration between our agency and those whose work touches ours. We should all work together toward one common goal.

Dr. Godfrey's committee expressed this thought in this way: "The program of all agencies — public and private — employing public health nurses should be coordinated, in order to provide against duplication in nursing service and to utilize most effectively every public health nurse employed. The tendency should be towards consolidation rather than towards the establishment of new organizations to meet recognized needs—towards a pooling of resources—rather than a wasteful competition for community support."

If we public health nurses want to be sure that more and more well prepared nurses join our ranks, we shall have to recruit students for our good nurses' training schools from high school and college graduates, and from the educated women of leisure who can devote their time to supplying the maximum amount of help in this war emergency.

And now, finally, we come to the responsibility the public health nurse has towards herself. She will want to do all in her power to keep herself healthy, and follow any suggestions that will help to protect her life and her capacity for service during the dangerous times that may lie ahead.

CONCLUSION

The role of the public health nurse in this emergency includes: (1) That she remain at her public health post. (2) That she prepare her thinking and herself so that she can alter her program as is necessary to meet emergency needs and to further this country's war effort. (3) That she assist in the preparation of

auxiliary workers and be willing to share with them certain phases of the work she has usually done. (4) That she seek and find ways and means for coordinating public health nursing efforts in her organization and community. (5) That she actively recruit qualified women for nurses' training schools and the armed forces. (6) That she do everything in her power to protect her health and safety.

A Health Department Secretary in the Public Health Program

*By (Mrs.) RUTH L. HONEYCUTT, Secretary
Duplin County Health Department
Kenansville, N. C.*

THE staff of local health departments consist of health officers, nurses, sanitary inspectors, milk and food inspectors, technicians, secretaries and clerical workers. The number of each depends upon the size of the county, type of program conducted by the department and amount of funds available for the prosecution of the public health program. Each of the above groups must have specialized training for carrying out his specific responsibility in this program.

The secretary of the county health department holds an important position carrying a great deal of responsibility, for the proper functioning of the public health program of the community rests upon her. In county or city administrative staffs the work of the entire department is supervised and carried on by the health officer. The health officer is actually responsible for the functioning of the department but his executive duties necessitate that he leave much of the routine work to the secretary. Therefore, it is essential that she work in close contact at all times with the health officer since her work is that of an executive assistant.

The work of the health department is divided into many branches, such as: communicable disease control, venereal disease control, tuberculosis control, maternity service, infant, pre-

school, school and adult hygiene, morbidity service, crippled children's service, general sanitation, protection of food and milk supplies, laboratory service, reportable diseases, vital statistics, general public health education, and administration. Each of these divisions function under the supervision of the health officer. The secretary must be familiar with the work of each of these divisions in order to coordinate the work of the staff members who are responsible for rendering these services. It is her duty to handle public contacts, route correspondence, requests, complaints and other matters to the staff member involved. The files of the department are kept in her office and fall under the supervision of the secretary who is responsible for keeping them accurate for reference by the staff members.

The secretary compiles statistical records and informational data for the health officer and the State Board of Health. Monthly statistical reports are compiled from the daily reports furnished by each worker in the department. In addition to these the secretary prepares financial reports based upon appropriations and expenditures of the department. In this manner functional and financial records of the activities of the local department are made available for various governmental agencies from the County Board of Com-

missioners to the United States Public Health Service. Two copies of the quarterly narrative report summarizing the activities of the department are required by the State Board of Health which in turn forwards one copy to the United States Public Health Service. This narrative report, vivid word picture, presents the activities of the department in a form more easily interpreted than that of a group of figures.

The secretary of the department serves in the capacity of private secretary to the health officer, answering all correspondence, telephone calls, complaints, and requests; preparing and releasing news items about the various phases of the health program and all other details connected with the activities of the department. It has been said that public health is 10 per cent prevention and 90 per cent educational, therefore, it would seem that the secretary can do much along the educational side to promote public health.

In cases where county health departments are for a time deprived of the services of a health officer, the secretary not only performs the above named duties but in a large measure must perform many of the administrative duties of the health officer himself. This condition has existed in many of the health departments throughout the state during the past few years. As an example, in our own particular county there have been five periods varying in length from one to six months during which the local health department has been without the services of a health officer. During these periods the secretary has had to act as the factual head of the department until the services of a new health officer could be secured. The other members of the department have been most cooperative but it still remained for the secretary to represent the department not only with the general public but also with the county governing body and the State Board of Health.

It is essential that the secretary possess a general knowledge of the various organizations, professional, civic, religious, etc. through-out the county which are not only willing but anxious to participate in the

public health program. In this respect she is able to advise a new health officer which of these groups can and will be instrumental in furthering activities of the department. A knowledge of local conditions and personalities is in this way an essential characteristic of an efficient secretary.

Further duties of the secretary include the responsibility for all incoming and outgoing mail: the ordering of all office and laboratory supplies and equipment and keeping a supply on hand: the dispensing of preventive agents such as: typhoid, smallpox, whooping cough vaccine, etc. to physicians, and silver nitrate to midwives.

The competent secretary makes intelligent use of authoritative publications, rapidly building up a skeleton framework of key facts into which additional facts may be inserted. She should be familiar with the pamphlets and bulletins which are available for free distribution and keep an adequate supply on hand and on display, that all who are interested may be supplied. She should have at her finger tips frequently used telephone numbers and addresses; she should know the names and recognize the faces of individuals calling frequently at the health department and she should know their occupations and degree of importance: she should be thoroughly familiar with office procedure (both general and specific) and be perfectly competent to arrange interviews, make appointments, handle schedules and the like. The health officer appreciates a secretary who can handle these details while he is occupied with more significant matters.

When funds become available for the employment of a new staff member or when there is a transfer to the department, it is the secretary's duty to assist such workers in learning the community and its people, and to interpret for them the established policies of that particular department. In the case of a new clerical worker, it is the secretary's responsibility to instruct her in every detail of the work for which she will be held responsible and to supervise this work.



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Vol. 57

NOVEMBER, 1942

No. 11

CHRISTMAS SEALS



.... Protect Your Home
from Tuberculosis

A GOOD INVESTMENT

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Mesles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Fleas	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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THE Health Bulletin



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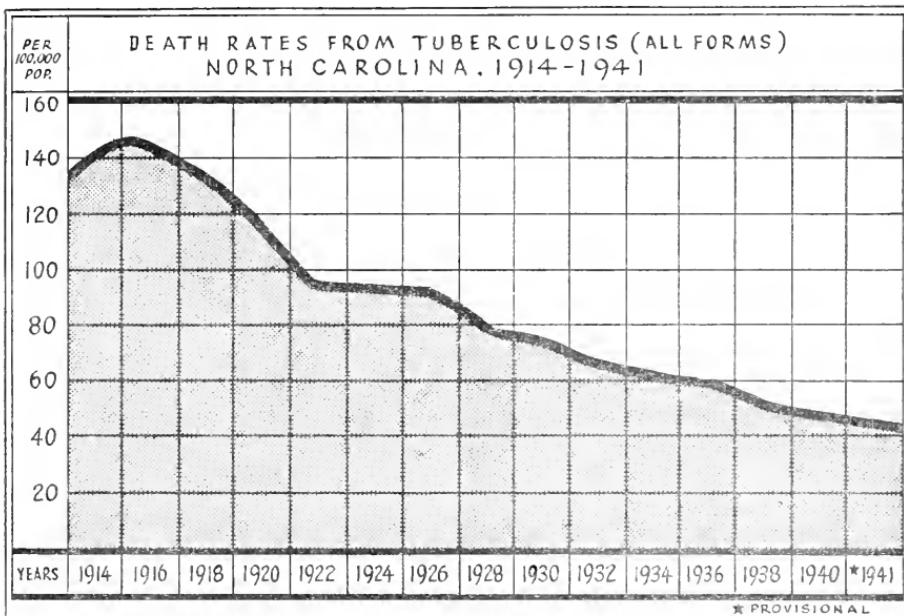
No. 11

CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Notes and Comment

By THE ACTING EDITOR



A GOOD FIGHT **T**N the above graph we have a statistical picture covering twenty-seven years of fight against tuberculosis. In this issue of The Bulletin Dr. McCain has given us a word picture of this fight. The progress which has been made is definitely encouraging and should stimulate our people to continue and to enlarge the campaign against the great white plague.

Since North Carolina did not adopt a Vital Statistics Law until 1913 and since it was not made effective until January, 1914, the data

which we have for 1915 is probably the first accurate information which we have concerning deaths from tuberculosis or any other disease. In fact, the completeness of deaths reported in 1915 is principally responsible for the fact that North Carolina was admitted to the registration area in 1916. In all probability the apparent increase in tuberculosis from 1914 to 1915 is a statistical error due to the incompleteness of reporting in 1914.

To Dr. McCain, his predecessors and associates, the State of North Carolina owes a great debt of gratitude. They have had help

from a great many individuals and agencies. They have not, however, had as much as they needed but they have manifested a zeal for service which has been an inspiration and an example of highest order.

* * *

WAR MEDICINE (A Symposium) Editor—Winfield Scott Pugh, M. D., Commander (M.C. U. S. N., Retired). Associate Editor—Edward Podolsky, M. D.; Technical Editor, Dagobert D. Runes, Ph.; Philosophical Library, New York City, New York—Pages, 565—Price, \$7.50.

Through the courtesy of more than a dozen medical journals the editors were permitted to assemble for reprinting in this volume the recently published papers which they deem most timely and helpful. Thirty-three of these papers deal with surgery, ten with Aviation and Naval Medicine, and fourteen with General Medicine.

In its August 31st issue the magazine "Time" chose to emphasize the psychiatric problems covered by the editors yet only four of the fifty-seven papers deal with the mental aspects of the war. From chiggers to bombs the hazards of war seem to be well outlined and proper methods of dealing with them are described. The book is well illustrated and has numerous tables, charts, and graphs. This is a book for doctors, in military service,

about to enter service, or who may be called upon to care for civilian casualties of war. If you wish to give your doctor a present, you cannot go wrong with this book, unless he already has a copy.

* * *

BOOKS New or nearly new books and booklets which may interest our readers. Some may be worth buying—others worth borrowing:

EVERYDAY NURSING FOR THE EVERY-DAY HOME by Elinor E. Nordin, R. N. & Bessie Donaldson, R. N. McMillan, New York, N. Y. 306 pages. \$2.50.

AMBASSADORS IN WHITE, Chas. Morrow Wilson. Henry Holt, New York, N. Y. \$3.50.

WILLIAM HENRY WELCH AND THE HEROIC AGE OF AMERICAN MEDICINE, Simon Flexner and J. T. Flexner. The Viking Press, New York, N. Y. 539 pages. \$3.75.

DOCTORS ANONYMOUS, The Story of Laboratory Medicine, Wm. McKee German, M. D. Duell, Sloan, Pearce, New York, N. Y. 300 pages. \$2.75.

ANNUAL REPORTS AND HOW TO IMPROVE THEM, by Mary Swain Routzahn. Social Work Publicity Council, 130 East 22nd St., New York, N. Y. 50c.

1941 REPORT GEORGIA WARM SPRINGS FOUNDATION, Warm Springs, Ga. Free.

North Carolina's Sanatoria for the Treatment of Tuberculosis

By PAUL P. McCAIN, M. D., Superintendent
State Sanatorium
Sanatorium, North Carolina

IN 1905, when Massachusetts and New York were the only States in this country which had state sanatoria for the treatment of tuberculosis, a young physician of Greensboro, Dr. J. E. Brooks, got himself elected to the Legislature for the purpose of securing an appropriation for the establishment of a state

sanatorium in North Carolina. He did not succeed during the session of 1905, but he returned to the Legislature in 1907 and, with the help of Dr. J. R. Gordon, his colleague from Guilford County who was chairman of the appropriations committee in the House, he secured an appropriation of \$15,000 to buy

a site and to build a state sanatorium and \$5,000 for the maintenance of the institution.

A site committee was appointed and the present site which is located about midway between Aberdeen and Raeford in the heart of the Sandhills was selected. It is in the famous winter resort section of the State, eleven miles from Southern Pines and thirteen miles from Pinehurst. "Nature seemed to have prepared and set apart this spot for the very purpose for which it has been dedicated." The climate is excellent, mild in the winter and cooled by almost constant breezes in the summer. From the top of the main building one can see the horizon on every side and can see a distance of twenty to twenty-five miles. Additional land has been secured for the purpose of obtaining a sufficient water supply and the institution now has a reservation of 2000 acres. Along a two mile front the property joins that of the 123,000 acre Fort Bragg reservation. The Aberdeen and Rockfish Railroad and highway No. 211 pass through the whole length of the property.

The institution was located at a great distance from the nearest towns because at that time it was thought that there would otherwise be serious danger of spreading infection. No community wanted the institution. One of the best evidences of how the public has become educated in matters pertaining to tuberculosis is the great change that has taken place in regard to the location of sanatoria. When the site for the Western Sanatorium was being considered in 1935 every county in western North Carolina was anxious to have the institution and made strong bids for it. Also when the site for the Eastern N. C. Sanatorium was to be selected in 1939 more than a hundred sites were offered in practically all of the eastern counties. The good people of Wilson not only themselves selected a site joining their city limits, but also contributed \$20,000 in cash for the purchase of the one hundred acre site.

In spite of the isolation and the many other handicaps under which he had to labor Dr. Brooks succeeded in securing two buildings for 32 patients, and the institution was first

opened in 1909. At that time tuberculosis was generally thought to be an incurable disease, but Dr. Brooks was able to get many of the leaders in the State to catch something of his vision of what could be accomplished through the early diagnosis and the proper treatment of this dread disease. He succeeded in securing additional, though small, appropriations. After a few years, however, his health gave way and the institution was under the care of Dr. M. E. Street, a member of the Board of Directors, until 1913 when the management of the institution was transferred at their request from the Board of Directors originally appointed to the State Board of Health which was under the capable direction of Dr. S. W. Rankin. Dr. Wilson Pendleton, a well trained specialist in tuberculosis, was chosen as Medical Director and Mr. Tyree Glenn as business manager. Dr. Pendleton soon resigned to accept the position as resident physician at the Gaylord Farm Sanatorium in Connecticut and Dr. Paul P. McCain of Due West, S. C., came in February 1914 as Medical Director.

At the special session of 1913 the Legislature also provided for the establishment of a Bureau of Tuberculosis for the purpose of educating the people of the State in matters pertaining to the disease. Tuberculosis was made a reportable disease and the ground work was laid for a wide educational campaign.

It was found that the institution was rather heavily in debt and it was felt that it would be needful to secure someone as Director of the Bureau of Tuberculosis who was known widely and well, not only in medical circles, but also generally, throughout the State, for his good business judgement. In April 1914 Dr. Rankin secured the services of Dr. L. B. McBrayer, who had been for some time Health Officer at Asheville and who was one of the best known health statesmen in the commonwealth. Dr. McBrayer was made Chief of the Bureau of Tuberculosis and Superintendent of the Sanatorium. Dr. McCain continued as Chief of the Medical Service and was made Assistant Superintendent of the Sanatorium and Assistant Chief of the Bureau of Tuberculosis. Dr. McBrayer and the State Board of

Health were able to secure additional funds and the institution began gradually to expand and its growth has been steady since.

The North Carolina Tuberculosis Association, a volunteer organization which is a member of the National Tuberculosis Association, has, since the early days of the fight against the disease, been an important factor in the control of tuberculosis. In 1915 Dr. McBrayer was made Executive Secretary of the North Carolina Tuberculosis Association and all of the activities, both of the official and of the voluntary agencies in fighting tuberculosis were correlated and centered at Sanatorium. In addition to supplementing the State funds for an active educational campaign in 1918 the North Carolina Tuberculosis Association engaged Dr. Joseph L. Spruill as the first clinic physician. Arrangements were made to conduct clinics in cooperation with the various Health Officers of the State and the ground work was laid for a more extensive early diagnosis campaign. Since 1914 the Sanatorium has conducted at the institution daily a diagnostic clinic to which all of the doctors in the State have been invited to send any of their patients who are unable to go to a private specialist and who are suspected of having tuberculosis. Also the Sanatoria invite physicians who wish to do so to send any chest films on which they would like to have consultation to the institutions to be examined. Through the clinics and through this X-ray consultation service many hundreds of early cases of tuberculosis are discovered each year.

In 1923 the anti-tuberculosis work had grown to such an extent that the Legislature made provision for the institution to be placed again under a separate Board of Directors. Dr. T. W. M. Long of Roanoke Rapids, one of the ablest physicians, sanitarians and hospital executives in the State, was made Chairman and Mr. W. E. Harrison of Rockingham, who both in the Senate and in the General Assembly led the fight to secure much needed appropriations for the institution, was made Secretary.

In 1924 Dr. McBrayer resigned as Superintendent, but continued as Executive Secre-

tary of the North Carolina Tuberculosis Association and also as Secretary of the State Medical Society. Dr. Paul P. McCain was made Superintendent and Medical Director of the Sanatorium and Director of the Extension Department of the N. C. Sanatorium, which had formerly been the Bureau of Tuberculosis. Dr. S. M. Bittinger, who had joined our staff two years previously, was made Assistant Superintendent and Assistant Medical Director.

The North Carolina Tuberculosis Association turned over to the Extension Department of the Sanatorium the responsibility of conducting the state-wide diagnostic clinics. The service was extended. Two clinicians were put in the field and, in addition to adult clinics, tuberculosis surveys of the school children of the State were undertaken through the use of the tuberculin test and X-rays of the positive reactors. Since 1926 approximately 700,000 school children and 15,000 college students have been studied for tuberculosis. Not only have many cases of tuberculosis been discovered in the early and curable stage through these clinics, but, by tracing the source of the children's infection to the homes, many hundreds of active and previously undiscovered cases of tuberculosis have been found.

The policy of the management of the institution from the beginning has been to urge all those who are able to do so to go to private institutions so that the beds at the Sanatorium could be reserved for those who were unable to finance their stay in private institutions. The management also has always felt that the care of tuberculosis patients who are unable to go to private institutions should be a joint responsibility between the counties and the State. The larger counties have been urged to establish their own institutions for the care of their tuberculosis patients. Guilford, Mecklenburg and Forsyth Counties have established splendid institutions which are modern in every respect and which for years have been caring for practically all of the discovered cases in their respective counties. The smaller counties have been urged, either singly or in combination with other counties, to establish sanatoria for the care of their

patients who were waiting for admission to the State Sanatoria and for those who are not suitable for admission to the State institutions. There is no possibility of controlling tuberculosis so long as patients with active disease and positive sputum are permitted to live in crowded homes. They will inevitably heavily infect the other members of the family, many of whom will eventually break down with the disease.

In 1912 the Red Cross Sanatorium in Wilmington was the first local sanatorium to be established. It has continued in operation ever since, it has 40 beds and Dr. J. C. Wessell is Medical Director. Altogether 23 North Carolina counties have sanatoria with a combined bed capacity of 949, of which 405 are for Negroes.

It has been found by the National Tuberculosis Association and the United States Public Health Service that for tuberculosis to be brought under control in a given community it is necessary to have at least two beds for tuberculous patients for each death from the disease. In 1935 North Carolina had less than one bed per death even when all the beds in the State, county and private sanatoria were included. The waiting list at the N. C. Sanatorium was so long that it was nine or ten months after patients filed their applications before they could be admitted. This, of course, often meant that under the unsanitary home conditions in which they had to live some of the patients would die before their turn for admission and most of them were considerably worse by the time their turn came.

At the 1935 session of the General Assembly Mr. E. A. Rasberry, representative from Greene County, introduced a bill for the establishment of the Western N. C. Sanatorium. The bill was championed by Senator L. L. Gravely, who was chairman of the Appropriations Committee in the Senate, and an appropriation of \$250,000 for construction and \$100,000 for maintenance during the first year was obtained with the understanding that additional funds would be secured through the PWA.

The Legislature also provided that the

Board of Directors should be expanded from 9 to 12 members and that the State Health Officer should be ex officio a member of the Board. It was also provided that the Board should have control of both sanatoria and of all the official anti-tuberculosis activities of the State. Senator Gravely, one of the most able friends tuberculous sufferers of the State have ever had, was made Chairman. Mr. E. A. Rasberry was made Vice Chairman and Mr. R. L. Harris was made Secretary. Dr. Paul P. McCain was made General Superintendent of both institutions and Dr. S. M. Bittinger was chosen as Associate Superintendent and Medical Director.

A site committee was appointed by Governor Ehringhaus consisting of Mr. Kemp P. Battle as chairman, Mr. E. V. Webb of Kinston and Dr. W. W. Sawyer of Elizabeth City. After investigating sixty odd sites in various counties in the western part of the State the committee selected a beautiful site, twelve and a half miles from Asheville and two and a half from Black Mountain, on Route No. 70. The site is located on a hill 800 feet distant and 80 feet above the highway. It is surrounded on all sides by as magnificent mountain scenery as can be found in eastern United States.

The institution was opened for patients in November 1937 with a capacity of 165 beds and with service units for twice that number. In 1939 Senator Gravely and other friends of the institution secured from the Legislature and from PWA additional funds for the erection of another wing which increased the capacity of the institution to 330 beds. Even with these additional beds, however, there was still a considerable waiting list at both institutions.

In 1939 Senator J. H. Spruill of Windsor introduced a bill for the establishment of an Eastern N. C. Sanatorium. The bill was acted upon favorably, but with the provision that at least 40% of the funds for the erection and equipment of the institution should be secured from Federal sources. Since this condition could not be met, no action could be taken until 1941 when Senator T. W. M. Long and

Senator J. H. Spruill introduced jointly a bill providing \$600,000 for the establishment and the equipment of the Eastern N. C. Sanatorium. Governor Hoey appointed as a site committee Mr. Odus Mull, of Shelby, chairman, Senator Joe L. Blythe, of Charlotte, and Mr. L. L. Burgin, of Hendersonville. As before stated a site of 100 acres joining the city limits of Wilson was selected from a large number offered after the people of Wilson had not only selected a beautiful site on top of a long sloping hill joining the city limits of Wilson, but also gave the Board \$20,000 in cash for its purchase. The property is located on the Rocky Mount highway and commands a splendid view of the surrounding country.

The new institution is practically completed and will be opened for patients with 110 beds for white and 110 beds for Negroes on the first of October. It will be dedicated on September 23rd with Governor J. M. Broughton as chief speaker. The institution will also be under the same Board of Directors as the other two Sanatoria. Dr. Paul P. McCain will be General Superintendent, Dr. Herman F. Easom, who has been Chief Clinic Physician of the Extension Department of the N. C. Sanatorium for several years and who a few years ago organized the Industrial Hygiene Department of the State Board of Health, has been selected as Associate Superintendent and Medical Director.

The N. C. Sanatorium, the parent institution, has grown from 32 beds in 1914 to 650. In 1923 a division for Negroes was established with 100 beds, which was the second State institution for Negroes in this country. In 1925 a separate division for tuberculous prisoners was opened and in 1927 a unit for children was added. Dr. Charles D. Thomas, who had been Assistant Superintendent and Assistant Medical Director of the N. C. Sanatorium since 1937, has been made Associate Superintendent and Associate Medical Director at the N. C. Sanatorium.

In addition to the provisions made for tuberculous patients in the three State Sanatoria 300 beds for tuberculous patients have

also been provided in the three State mental hospitals. Of the 14,917 beds for tuberculous patients in the thirteen southern States North Carolina has 1,901 beds in addition to the 300 in the State mental hospitals and in addition to the 850 beds in the Federal Hospital at Oteen. When the capacity of the Eastern Sanatorium is eventually doubled as planned and when a number of the other counties establish their own county institutions, the State will have at least two beds per death and will have a real opportunity to bring the disease under control.

One of the important factors in the control of tuberculosis in the State has been the eradication of tuberculosis among the cattle. Dr. William Moore, the State Veterinarian, and his associates brought a very great honor to North Carolina in 1928 when they made North Carolina the first State in the union with a modified accredited tuberculosis free state-wide cattle herd. Tuberculosis in cattle is communicable to human beings and tuberculous milk used to cause approximately 7% of the human deaths from tuberculosis. This source of infection Dr. Moore has stopped. This demonstration in wiping tuberculosis out of the cattle in the country has proven to be an added incentive to wipe out the disease in human beings. The disease was eradicated in cattle by giving all the animals in the State the tuberculin test and by slaughtering those that were positive. Control of the disease in human beings can be brought about through the wide application of the tuberculin test and by making X-ray films of the positive reactors to see which ones have the disease in the communicable form and by providing beds in institutions for these cases until their disease can be brought under control. So long as persons with the communicable form of the disease are undiscovered and so long as they continue to live in close contact with others control is impossible. By furnishing proper isolation and treatment and through early diagnosis there is every prospect that the disease will eventually become one of the minor causes of death.

When Dr. Brooks endeavored to secure funds for the establishment of the institution in 1905, he was doubtless actuated largely by humanitarian motives, but, aside from the many thousands of lives which have been saved and an untold amount of suffering which has been relieved, the money spent for the control of tuberculosis has also proven to be probably the best investment from a financial standpoint that the State has ever made. In 1915, the first year when reasonably accurate statistics on the number of deaths from tuberculosis was obtainable, the death rate from tuberculosis was 156.4 per 100,000 population. In that year there were 3,710 deaths from tuberculosis, and tuberculosis was by far the leader of all the causes of deaths. Had the same rate for the disease continued to the present, there would have been 5,586 deaths from this dread disease in 1941 instead of the 1,717 which actually occurred. This means that in 1941 3,869 people were saved from the clutches of the Great White Plague. It is conservatively estimated that each per-

son who dies from tuberculosis costs the State \$3,000 during the several years in which he is an invalid in medical and nursing care, in cost of maintenance, loss of labor, et cetera. With a death rate of only 49 per 100,000 instead of the 156.4 of 1915 the State, from its investment, cleared \$11,508,000 in 1941. The investment has also been paying splendid dividends all through the years. Instead of standing first on the list as a killer tuberculosis is now in the sixth place.

The present members of the Board of Directors of the North Carolina Sanatorium are as follows: Mr. L. L. Gravely, Rocky Mount, Chairman; Dr. Thurman D. Kitchin, Wake Forest, Vice Chairman; Mr. Carl C. Council, Durham, Secretary; Dr. Carl V. Reynolds, Raleigh, ex officio; Dr. Paul Ringer, Asheville, Dr. J. R. Terry, Lexington, Mrs. Max T. Payne, Greensboro, Mr. R. E. Finch, Black Mountain, Mr. Robert M. Hanes, Winston-Salem, Dr. G. E. Bell, Wilson, Mr. E. V. Webb, Kinston, Dr. J. N. Britt, Lumberton and Mr. Edwin Pate, Laurinburg.

Christmas Seals At Work

By FRANK W. WEBSTER, *Executive Secretary*
North Carolina Tuberculosis Association
Raleigh, North Carolina

WITH Christmas close at hand, we want to call your attention to one of our most valuable, far-reaching Christmas Traditions—the Christmas Seal which supports the fight against tuberculosis.

This year marks the 36th year that the appearance of the small tuberculosis Seal on the flood of our Christmas mail has proved that we Americans are sincerely trying to protect our own against an insidious infecting disease.

Last year, by purchasing Christmas Seals through your local tuberculosis associations, you invested \$93,080.23 in health insurance for North Carolinians. \$88,426.22 or 95% of the total amount was spent in North Carolina to fight tuberculosis. 75% of the total amount

raised or \$69,809.74 was retained by local tuberculosis associations and committees to carry on the program in their communities. 20% of this sale or \$18,616.04 was used by your North Carolina Tuberculosis Association for the nation-wide program. In other words, 95 cents out of every dollar invested in Christmas Seals by you is kept in North Carolina for tuberculosis work.

The 20% that went to your State Association was spent to maintain an office, coordinate the entire state program, field visits, cooperate with the National program and with other states as well as with other social and health agencies, and to pay the salaries of an executive secretary, a state field worker and one office secretary as well as to furnish all

of the Christmas Seal Sale Supplies to all Chairmen.

The expenses were as follows:

Health Education.....	\$4,260.46
Field and Organization	2,621.42
Administration	2,765.93
Seal Sale.....	6,459.17

The nickel out of every dollar sent to the National Tuberculosis Association is well spent. For this amount the National Association carries on a continuous research in methods of treatment of tuberculosis, field service to the state and local associations, publications and many other helps. I know of no campaign in this country where local communities keep more money from funds raised.

The local tuberculosis associations spend 75% of the funds raised for some or all of the following services: Community Health Education, case finding (tuberculosis testing, X-rays), demonstration nursing, school health programs, nutrition, organization of citizen's groups and cooperation between agencies of the community, rehabilitation, improvement of sanatorium facilities, including medical social service, programs for professional societies, industrial surveys, cooperation with health and welfare departments, follow-up of draft rejectees, emergency relief for the tuberculous, and many other such services.

The Christmas Seal is the sole support of your local, state and national tuberculosis associations. This year, in spite of all the calls for your dollars, we must not fail to support this cause. We must not fail to observe the old tradition of Christmas Seals—a tradition that literally saves lives.

Take another look at the Christmas Seals this year. They have a new meaning now, a martial meaning. Little though they are, they have a place among ships, planes, tanks and jeeps.

"Modern conflicts," says Dr. Kendall Emerson, "are not settled on battle fronts alone." The Managing Director of the National Tuberculosis Association reminds us that 18 workers at home are required to keep one soldier in the fighting area, and that established

activities for the control of tuberculosis as a part of the general plan to protect the home front must not falter.

In all past wars tuberculosis has increased. History has begun to repeat itself. Already tuberculosis is increasing in a number of overcrowded areas throughout the country. Unless history can be rewritten this time, tuberculosis will kill more Americans throughout the duration than will be killed in action or die from wounds received in action.

In the last four years, tuberculosis has killed 10,000 more persons in this country than were killed in action or died from wounds received in action in all the wars combined that this country has engaged in from the Revolutionary War up to December 7, 1941.

Nazi air raids over England during a ten-month period in 1940-41 caused some 36,000 casualties. During the same period tuberculosis caused nearly 50,000 deaths in the United States.

In 1940 alone this foe that never rests accounted for 10,000 more Americans than were killed in the first World War. 1,760 persons in our state died from this disease in North Carolina during that year and in 1941, 1,717 more persons in our state died from this enemy of mankind. It is a matter of great significance that war always paves the way for a temporary increase in tuberculosis. They are inseparable allies.

Between 1914 and 1917 the death rate from this disease increased 21 per cent in Italy, 44 in Germany and 69 in Austria. Even this country far removed from the devastation that brought about such results, felt its influence. Our tuberculosis death rate, which had been dropping steadily up to 1917, the year we entered the war, then climbed back to the 1912-14 level, and no further gains were registered until 1919. Now with the worst war of all time serving as a worldwide ally of this destroyer, it is more than ever necessary to keep in mind the statement of a prominent health authority that "We know all we need to know to eradicate tuberculosis."

Hour by hour the fight goes on, with the

Christmas Seal each year unfurling a new flag, and the forces behind it intent on final victory! The fact that it "gets things done" and the equally important fact that 95 per cent of the money it raises "stays at home" to help in the battle, have won the support of all manner of community groups—churches, schools, industrial and fraternal organizations, women's clubs, labor unions, commercial bodies, welfare workers, health departments and the like. Through it hosts of people in every walk of life have been made aware not only of an individual responsibility, but of a personal opportunity to serve as soldiers in a war against vast loss and misery. The pointing of ways to fight the foe, made possible through wise use of Christmas Seal funds, has

stimulated large appropriations by states, cities, and large gifts from foundations and individuals. It is safe to say that virtually every dollar now at work against tuberculosis in the United States stems from one of these penny reminders which have become almost as much a part of Christmas as Santa Claus himself.

When some future historian—not so far in the future, let us hope—tells how this plague was laid on the shelf alongside smallpox, typhoid and yellow fever, he will have to say it was killed by "Merry Christmas!"

Take another look at the Christmas Seals this year. They mean more to us than any year since 1917.

What Is In A Quart Of Milk?

By FRANK W. SHERWOOD, Ph. D.

Department of Animal Industry
N. C. Agricultural Experiment Station
Raleigh, North Carolina

WHAT is in a quart of milk? Nutritionists and dieticians constantly tell us that milk is the best balanced and most perfect single food, and that each child should have a quart and each adult a pint of milk each day. But just what do we get for our money when we buy a quart of milk?

Some people that I know have the notion that, just because milk is liquid, there is too much water and not enough solid food in it. Just a moment's examination of a table of analyses of foods will show that there is actually less water in a pint of milk than in a pound of cabbage or beets or squash or tomatoes or many other fresh succulent vegetables. Even that old standby the Irish potato, has nearly but not quite as much water in it as an equal weight of milk. Actual analysis shows that whole milk does not contain any more water than an equal weight of the edible portion of most of our fresh fruits and vegetables. This may be said in another way,

namely, the food energy value of milk is larger than that of cabbage, onions, okra, snapbeans, carrots, tomatoes, and a great many other vegetables.

Now let's turn to the nature of the actual food materials in milk. A quart of milk contains somewhat over an ounce of an excellent quality of muscle building protein, which is about one third of our daily requirement. Proteins from different sources do not have equal value in meeting the needs of the body. Those from vegetables are, as a rule, inferior to those of animal origin, but the milk protein ranks with the very best.

If a child failed to get his daily quart of milk and tried to get an equal amount of protein from other protein rich foods he would have to eat five eggs or nearly five ounces of cheese or over five ounces of chicken or beefsteak or about seven ounces of pork chops or ham. If he tried to get this same amount of protein from vegetable sources he

would not get as good quality but he could get the proper amount from about 13 ounces of bread or five ounces of dried beans or eight ounces of oatmeal or nearly four ounces of peanut butter.

All of the figures just given are based on the average composition of the foods as purchased and do not allow for any waste in preparation or in serving. When it is remembered that there is always some loss in cooking and that there are no bones, trimmings or other waste in a quart of milk, it is seen that milk is even more valuable than the above comparison indicates.

Another way of showing the relative value of milk is to compare the retail price of a quart of milk with that of five ounces of good beefsteak or of seven ounces of pork chops. At present prices such a comparison will show that milk is one of the cheapest sources of first class protein, not counting, at all, the extra values in the butter fat, the minerals and the vitamins which it also contains.

While milk varies in the amount of fat that it contains, depending upon the breed of cow and several other factors, a fair average is about 4 percent fat. This is equivalent to about one and one half ounces of butter or three ounces of whipping cream in every quart of average whole milk.

One of the outstanding values in milk is its minerals. It is very difficult to supply enough calcium in the usual American diet if milk is not used in liberal amounts. A quart of milk a day will supply the calcium requirement of a growing child whereas 10 to 20 times as much of most other foods would be required to furnish this amount of calcium. A quart of milk contains more calcium than a quart of clear, saturated lime water.

Milk also contains notable amounts of the other mineral elements, except iron, needed by the body. These substances, however, are not so apt to be lacking if we eat a good varied diet, including liberal amounts of fruits and vegetables.

The vitamins in milk may vary consider-

ably depending upon what the cow eats and on other factors. A quart of average milk contains enough vitamin A to meet $\frac{1}{2}$ to $\frac{3}{4}$ of the daily requirement of a child and about $\frac{1}{2}$ of that needed by an adult. Milk from cows on pasture is much better in this respect than that from cows on dry feed. This quart of milk also contains enough thiamine, or vitamin B, to meet the needs of a child under one year of age. As the child grows his requirements increase so that additional thiamine must be supplied. This is best done by whole grain cereals and enriched bread.

In addition to the vitamin A and thiamine one quart of milk also furnishes very considerable amounts of the pellagra preventing niacin, or nicotine acid, and enough riboflavin to supply the needs of a five or six year old child.

A comparison of the amounts of other common foods required to supply the vitamins that we get in a quart of milk, shows that, while milk is a fair to good source of these essentials, it does not contain as much vitamin A as the green leafy vegetables nor as much thiamine as the whole unmilled cereals. However, quality considered, milk is one of the best and cheapest foods that we can buy. It does not contain any more water than many of our fruits and vegetables. If milk were bought on the basis of its protein content alone, it would compare favorably in price with other good quality protein foods. In addition milk is our very best source of food calcium and it contains appreciable amounts of other minerals and notable quantities of most of the vitamins.

For health—drink milk!

Medical research in tuberculosis, financed by the Christmas Seal Campaign, is going on in 11 outstanding universities throughout the country.

The Christmas Seal Campaign is one of the oldest health drives in the country, having started in 1907.

The Army and the Navy are chest X-raying all the men coming into the service in an effort to find tuberculosis.

An Extra Challenge From Tuberculosis

By FRANK W. WEBSTER, *Executive Secretary*
North Carolina Tuberculosis Association
Raleigh, North Carolina

THIS Christmas, when we are vitally concerned in building up our armed forces and in making the fullest possible use of all our human and material resources, the fight against tuberculosis takes on added meaning. For tuberculosis is one of those enemies which are always most active and dangerous at a time when we are working and straining and pushing our energies to the utmost.

Thus, in addition to the normal challenge of tuberculosis, we must meet the extra challenge which comes from the tendency of tuberculosis to increase at a time of great human activity, such as wartime.

There are many good reasons for believing that we can win the fight to bring tuberculosis under control and substantially eradicate it. First, the cause of tuberculosis is known. And, although no specific cure has yet been developed, if tuberculosis is found early enough, and adequately and properly treated, the patient may usually be expected to recover and resume a normal life. Thirty years ago there were almost three times as many deaths from tuberculosis as there are today, and in that period this disease has fallen from the first to the seventh place among the causes of death. Nevertheless, tuberculosis causes more deaths than any other disease among women in the ages between 20 and 30 and among men in the age group from 30 to 40 years—years when manpower and womanpower are vital to America's war effort.

Another reason for encouragement is the fact that we know enough about the habits of the tubercle bacillus, so that we can prevent its spread from one person to another if only we apply our knowledge and obtain the assistance of everyone who is in contact with the tuberculosis patient.

We should, first, find tuberculosis among members of families who have been exposed to known cases of tuberculosis in the family

circle. Second, find unknown cases in the early stages of the disease by X-raying apparently healthy persons who are especially susceptible to tuberculosis because of the nature of their employment, age, sex or race. And, third, encourage and stimulate patients to go to sanatoria for treatment and to learn how to take care of themselves.

This campaign is an important part of our national war effort and it is not a job merely for doctors or public health workers—it is a challenge to every one of us. Here are some of the essential facts about tuberculosis.

First, tuberculosis is not inherited. It is transmitted by direct, and sometimes indirect, contact between an infected and uninfected person. The tubercle bacillus most commonly attacks the lungs, but it may also injure other parts of the body. It may remain in the body without causing trouble for many years. But, if these germs invade our body often enough, and in great enough force, even a robust constitution may not be able to withstand the attack.

If the germs really get a foothold, infection is the result. Then the body's defense forces go into action and they may be able to build a little capsule around the invaders and neutralize them before the infection has spread beyond control. However, when the body is chronically fatigued we may break down easily. On the other hand, if we successfully resist tuberculosis, doctors have found that a single attack will put the whole body on the alert against further attacks, and in many cases resistance grows as we grow older.

What are some of the signs of this disease? A chronic feeling of fatigue without apparent good reason is often a warning of the beginning of tuberculosis; loss of weight accompanied perhaps by loss of energy; a cough or cold that hangs on; loss of appetite; indigestion; pains in the chest; spitting of blood and

night sweats. All these may mean that the germs of tuberculosis are actively at work. Certainly any one or two of these symptoms should be enough to take us to our doctor's office for a thorough examination—for, in treating tuberculosis, "a stitch in time saves nine."

Tuberculosis often exists without any obvious signs or symptoms. It rarely strikes a sharp blow in the beginning, and the danger signs we have listed frequently do not appear until the disease has advanced to a dangerous stage.

This explains the great importance of the X-ray, which has enabled the trained physician to discover tuberculosis in its earliest stages, and also to determine how extensive and how serious its attacks have been.

Thus the X-ray and the sanatorium are the two essential weapons in our battle against tuberculosis. By means of the X-ray we can find the tuberculosis patient early and by sending him promptly to the sanatorium we not only assure the patient of the best prospect of recovery, but remove him as a possible source of infection for others.

Another major aid in finding tuberculosis is the tuberculin test, a skin-reaction test which will indicate whether or not a person has ever been infected with tuberculosis germs. A positive reaction to the tuberculin test in an adult is significant only as a first step toward a possible diagnosis of tuberculosis, to be confirmed or rejected by the X-ray or fluoroscope and physical examination later on.

Perhaps half of the adult population would react positively to a tuberculin test, but not more than half-a-dozen out of a thousand of us have tuberculosis. The older we are, in fact, the more likely we are to react positively to the tuberculin test, because the longer we have lived the more opportunities we have had to receive infection from an open case.

On the other hand, a positive tuberculin test in a young child is most significant, because it shows that someone—usually some adult among the relatively few persons with whom that child comes in contact—probably has an open case of tuberculosis and is infect-

ing and reinfecting the child. The childhood type of tuberculosis is not considered serious in itself unless by reinfection it later develops into the adult type.

If any community really wants to get rid of tuberculosis it should first concentrate its activities among those population groups where the disease is found most frequently, especially among industrial workers, workers in dusty trades, Negroes and patients in general hospitals.

For the sake of the children in the community and for our own sakes as well, every adult member of every household should be examined periodically, including a fluoroscopic or X-ray examination of the chest. The cost of such an elementary precaution can scarcely be compared to the cost of treating an advanced case of tuberculosis. Most of us who drive cars cheerfully spend far more each year to tune up our motors or "winterize" our automobiles. Now that we are driving less, some of our erstwhile automobile budget might be devoted to the fight against tuberculosis, which is also a battle to secure and preserve health and happiness for ourselves and our families.

The answer to the question, "Can we abolish tuberculosis?" is "Yes, if"—and that "if" is a big one, involving a duty for each one of us to acquaint himself with the facts about tuberculosis and to make himself a committee of one to see that his family and his community do everything that can be done to meet this challenge.

Ninety-five per cent of the money in the Christmas Seal Campaign remains in the state in which it is raised. Five per cent goes for the national campaign.

Tuberculosis kills more people between 15 and 45 than any other disease.

In Germany, patients sick with tuberculosis have been put to work in war factories.

There are more than 100,000 beds for the treatment of tuberculosis in the United States.

A Formula for Daily Living from "Worry and Its Cure"

By REV. P. D. WOODALL
Louisburg, North Carolina

ACCEPT Christ as your Savior. Do all the good you can. Make prayer and Bible reading a daily habit. Attend church every Sunday. Obey the Golden Rule.

2. Remember that all honest work is honorable in the sight of God. Put joy into it, no matter how insignificant it may seem to be, whether it is down on the knees scrubbing the floor, or ditching.

3. Create happiness in your home and wherever you may go. Be lovable.

4. "Live one day at a time." Do not borrow trouble. When you think of the future, think of the blessings you may enjoy.

5. Do not hate any one, not even the cruel and treacherous Hitler. It is agreed among the best authorities that hate produces stomach ulcers and blindness. The writer once knew a woman who hated another woman, saying she wished she would go blind. She herself went blind.

6. When bereavement and misfortune come, do not say they are greater than you can bear. Face them calmly and courageously, believing St. Paul to be true when he said: "All things work together for good to them who love God." Under hard conditions learn to laugh and whistle. I was standing one day in the door of my home, when I noticed an aged man approaching from the street. His clothing was rags and his general appearance indicated he was a pauper. He carried a small bag of tools, and was whistling. He said to me: "Do you have scissors that need to be sharpened?" When I told him no, he turned and walked away still whistling.

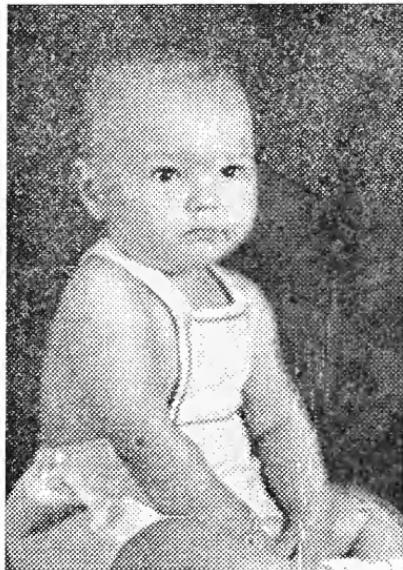
7. Seek the company of people whose presence is uplifting and inspiring. Study and love the beauties of nature, spending as much time as possible out of doors. Read "bits of fun," good books and magazines.

8. If you are true to God, your greatest joys

always follow your greatest tribulations. This is verified by one of the most beautiful promises in the Bible: "Weeping may endure for a night, but joy cometh in the morning."

9. Practice the following auto-suggestion every day on and on indefinitely: "I can and will have in my daily affairs and in this war, faith, hope, patience, courage, endurance, christian charity toward all mankind and love for only the beautiful and good." These are life's great creative forces and will make you a new person.

*From "Worry And Its Cure."
(Second Edition).



Gordon Murray Betenbaugh, son of Mr. and Mrs. Charner M. Betenbaugh, 414 4th Street, High Point, N. C. At age 1 year weighed 26 pounds. Bulletins of the State Board of Health were helpful in bringing up this young man.

**DEATHS FROM TUBERCULOSIS OF THE RESPIRATORY SYSTEM
BY COUNTY AND RACE: 1941**

TOTAL DEATHS (TUBERCULOSIS, ALL FORMS) 1,717

COUNTY	BY PLACE OF DEATH			BY PLACE OF RESIDENCE			COUNTY	BY PLACE OF DEATH			BY PLACE OF RESIDENCE		
	Total			Total	White	Colored		Total			Total	White	Colored
	Total	White	Colored	Total	White	Colored		Total	White	Colored	Total	White	Colored
Total, State.....	1561	621	933	1328	476	845	Johnston.....	14	7	7	18	11	7
Alamance.....	12	4	8	19	10	9	Jones.....	4	1	3	5	1	4
Alexander.....	2	2	2	2	2	2	Lee.....	3	1	2	9	3	6
Alleghany.....							Lenoir.....	20	4	16	24	5	19
Anson.....	5	1	4	12	2	10	Lincoln.....	1	1	1	3	1	2
Ashe.....	1	1	1	3	3	1	McDowell.....	3	3	6	5	5	1
Avery.....	9	7	2	8	7	1	Madison.....	1	1	2	2	2	1
Beaufort.....	15	4	11	18	7	11	Martin.....	12	4	8	13	4	9
Bertie.....	7	1	6	8	1	7	Mecklenburg.....	58	16	42	62	16	46
Bladen.....	10	1	9	14	3	11	Mitchell.....	4	4	6	6	6	6
Brunswick.....	4		4	4		4	Montgomery.....	1		1		4	4
Buncombe.....	333	223	110	58	41	17	Moore.....	5	3	2	9	4	5
Burke.....	19	16	3	10	6	4	Nash.....	23	5	18	31	7	24
Cabarrus.....	16	14	2	17	14	3	New Hanover.....	23	3	20	24	4	20
Caldwell.....	8	8		9	9		Northampton.....	7	1	6	8	1	7
Camden.....	2			2	3	1	Onslow.....	6	3	3	8	4	4
Carteret.....	6	3	3	9	5	4	Orange.....	7	1	6	7	1	6
Caswell.....	5	2	3	7	2	5	Pamlico.....	6	2	4	6	2	4
Catawba.....	7	4	3	9	6	3	Pasquotank.....	13	5	8	12	3	9
Chatham.....	2		2	6	1	5	Pender.....	3	1	2	3	1	2
Cherokee.....	1	1	1	1	1		Perquimans.....	4	1	3	5	2	3
Chowan.....	6	1	5	8	1	7	Person.....	11	5	6	13	7	6
Clay.....							Pitt.....	25	3	22	37	5	32
Cleveland.....	10		10	10			Polk.....	3	2	1	3	2	1
*Columbus.....	10	3	6	11	4	7	Randolph.....	5	4	1	5	4	1
Craven.....	29	3	26	37	9	28	Richmond.....	13	7	6	16	9	7
Cumberland.....	24	9	15	24	8	16	*Robeson.....	15	2	10	13	2	11
Currituck.....				1	1		Rockingham.....	21	8	13	25	8	17
Dare.....	1	1		1	1		Rowan.....	14	2	12	18	5	13
Davidson.....	4	4		9	8	1	Rutherford.....	4	4	5	5	4	1
Davie.....	1		1	2			Sampson.....	9	1	8	12	2	10
Duplin.....	5	2	3	7	3	4	Scotland.....	10	2	8	12	3	9
Durham.....	43	10	33	42	10	32	Stanly.....	6	2	4	6	2	4
Edgecombe.....	28	6	22	29	5	24	Stokes.....	1		1	3	2	1
Forsyth.....	78	16	62	77	12	65	Surry.....	14	11	3	17	14	3
Franklin.....	9	1	8	11	2	9	*Swain.....	4	3	3	3	3	
Gaston.....	8	4	4	15	9	6	Transylvania.....	3	3	6	6	6	
Gates.....	3		3	4		4	Tyrrell.....			1		1	
Graham.....	1	1		1	1		Union.....	15	5	10	15	5	10
Granville.....	6		6	8	2	6	Vance.....	16	4	12	20	5	15
Greene.....	4		4	8	2	6	Wake.....	59	28	31	45	12	33
Guildford.....	47	20	27	50	22	28	Warren.....	8	2	6	8	2	6
Halifax.....	22	4	18	30	6	24	Washington.....	3		3	4		
Harnett.....	8	7	1	10	8	2	Watauga.....	1	1	1	1	1	
Haywood.....	5	5		5	5		Wayne.....	86	9	77	39	10	29
Henderson.....	2	1	1	4	2	2	Wilkes.....	6	5	1	8	7	1
Hertford.....	12	3	9	14	4	10	Wilson.....	44	9	35	46	9	37
*Hoke.....	97	28	67	11	1	10	Yadkin.....	2	1	1	4	2	2
Hyde.....	1		1	2	1	1	Yancey.....	1	1	1	1	1	
Iredell.....	10	4	6	15	5	10							
Jackson.....	2	1	1	2	2								

*Indian deaths (place of death)

Cumberland 1

Hoke 2

Robeson 3

Swain 1

*Indian deaths (place of residence)

Cumberland 1

Robeson 5

Swain 1



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	
Infant Care. The Prevention of Infantile Diarrhea.	Instruction for North Carolina Midwives.
Table of Heights and Weights.	

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THE Health Bulletin



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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Notes and Comment

By THE ACTING EDITOR

CUMBERLAND COUNTY

THE new health center in Cumberland County is the

cause of joy in the hearts of all veteran health workers who have seen the health departments climb out of the basement or descend from the attic and assume a position of respect and appreciation in the community. This health center is tangible evidence that the work of the Cumberland County Health Department through the years has been worth while. With their increased facilities Dr. Foster and the members of his staff have increased responsibilities. Those of us who know him have every confidence that he will continue to render the high service which is expected of him.

* * *

DOCTOR REYNOLDS

One of the many reasons why employees of the State Board of Health admire

and respect their boss is that when he is confronted with new or unusual problems he is neither dismayed nor afraid to face them. He seeks information, analyzes it and then proceeds to the heart of his subject. To the health worker the maladjusted have been considered outside the field of our endeavor and almost, if not quite, out of the range of our interest. In the paper which Doctor Reynolds has presented at the 72nd Annual Congress of Correction, he has shown clearly that there must be a new approach to this problem. His logical presentation has won the praise of men who are outstanding in the field of

psychiatry and mental hygiene. His paper in this Bulletin should stimulate the thought of all persons who are interested in public well being.

* * *

DANGEROUS DISEASE

For a long time Gonorrhea has been under rated as a public health problem. Dr. Lord is rendering high service in helping to give us a more proper attitude toward this disease. Women physicians are relatively rare. It is more than unusual to have a woman health officer but Dr. Lord is an unusual woman. She has a record of accomplishments which make thousands indebted to her.

* * *

HEALTH IN WARTIME

Dr. Plunkett's paper "Tuberculosis in War-time" contains so much information which we thought our readers should have available to them that we asked for and received permission to reprint it and which we are carrying in this issue of the Bulletin. Although he is thinking primarily of the effect of war on tuberculosis, he calls our attention in no uncertain terms to the effect of war on nutrition. Thoughtful reading of his paper should be helpful to those who are interested in North Carolina's health program.

* * *

MR. RICHARDSON

There is an hackneyed phrase "How're we doing?" that is frequently used

in levity and almost as frequently in the thinking of public health workers. We are prone to compare communicable disease reports and deaths for a month or a part of a year with those of preceding months or parts of years. Our vital statistic records are the final proof of the effectiveness of our procedures. Mr. Richardson has given us in this issue a preview of vital statistics for 1942. In doing so he has called attention to several lessons which we should learn by experiences of the past. We would call particular attention to his data on accidents, especially highway accidents.

* * *

ACCIDENT FACTS

The National Safety Council, Inc., Chicago, has recently issued a one hundred twelve page booklet dealing with accidents occurring in 1941. One pertinent bit of information is that industrial accidents in our war plants have caused a slowing up in our production of war equipment. If these accidents had not occurred, 200,000 more soldiers, sailors and marines could have been outfitted. We could have built 20 more battleships, 100 more destroyers, 9,000 more bombers or 40,000 more tanks. There were 18,000 fatalities in war industries: there were 29,000 other "off the job" fatalities, many of which were home accidents. In our entire population home accidents claimed 31,500 lives, more than half of which were due to falls. There were 4,650,000 serious injuries, 130,000 of which resulted in permanent disabilities. The wage loss, medical expense and other costs of these totaled \$600,000,000.

With the approach of winter a new home accident hazard presents itself. The actual number of deaths chargeable to heating plants is not known but it is known that the number is substantial. There are persons killed in burning buildings, there are fatal burns and there are asphyxiations by gas. These three types of accidents alone account for about 7,000 deaths in American homes. Most of these occur in the winter months. These are preventable accidents. A careful inspection and reconditioning of heating

equipment before subjecting it to the strains of its winter time function will accomplish two useful purposes. In the first place, we can save lives. In the second place, we can get more efficient heating. These inspections should be made by competent people, the neighborhood handyman or the householder himself are not likely to do a good job either in the inspection or the reconditioning.

With fuel shortages we will be tempted to use fuels which are not designed for our heating equipment. It may be that some will attempt to collect hot ashes in wooden or paper receptacles. People will try to speed up a fire in a grate or stove by pouring on kerosene. More people will be using a fireplace—fire screens may be difficult to obtain. Altogether there are many influences which will combine to make our heating problems more dangerous this winter than it usually is. Under the circumstances we must warn our readers and urge that carelessness be eliminated at least for the duration.

* * *

NURSES The nation-wide shortage of physicians, dentists and nurses is causing alarm. The National Nursing Council for War Service has issued the following standards by which a nurse can determine whether or not she should serve with the armed force or at home:

You Should Serve with the armed forces

If you are single, under 40, and are

1. Doing private duty
2. On a hospital's general staff
3. A head nurse not essential for teaching or supervision
4. A public health nurse not essential for maintaining minimum civilian health service in any given community.
5. In a non-nursing position
6. An office nurse

You Should Serve at home

If you have a position

(Continued on page 15)

Cumberland County Health Department

By M. T. FOSTER, M. D.
Health Officer
Fayetteville, North Carolina

THE Cumberland County Health Center was constructed under the Defense Public Works Administration program by the Public Buildings Administration, Federal Works Agency, Washington, D. C. The Board of Commissioners of Cumberland County applied for funds under this program and an allotment of \$51,000.00 was granted for this project. The building was planned and designed by Basil G. F. Laslett, Architect of Fayetteville, N. C. The architect worked in close conjunction with Dr. Malcolm T. Foster, Health Officer for Cumberland County and the City of Fayetteville, in order to attain the most practical solution for the problem of providing adequate quarters for a Health Center. The Dixon Construction Company of Fayetteville, N. C. was the General Contractor for the erection of the building. The building is located on Person Street, three blocks from the old Market House in a section of the city from whence comes the greater proportion of patients to the various clinics. Due to the influx of population caused by the rapid expansion of Fort Bragg and the setting up of Fayetteville as a Defense Area, the needs for health department activities have been tremendously increased. All responsible authorities were convinced of the desirability of having this modern Health Center.

Having in mind that the primary consideration of a Health Center should symbolize "HEALTH" and along with it sanitation and the other correlative practices, it was decided to design the building in a modern style. This style gives the maximum of light and ventilation in its execution, and also provides opportunity for economies which were a foremost consideration. The result obtained is most gratifying in that the exterior of the building expresses the purpose for which it was designed, a Health Center.

It was essential that the building be con-

structed of non-critical materials, using a minimum of critical materials where necessary. The footings are of concrete, walls of selected face brick, backed with cinder concrete blocks. The floors are of wood construction finished with asphalt tile flooring throughout the building. The roof is of built-up composition type supported on wood trusses. The sash and front entrance detail are of wood. A circulating hot water system with an oil burner was provided for heating the building, feeling that this type heat would give the maximum in efficiency and cleanliness as well as being comparable economically with other systems for this size installation and operation. The plumbing layout is modest in design and cost, though satisfactory and adequate for the building. The electric lighting layout is the finest obtainable as this was an essential. Fluorescent fixtures are used throughout. Proper ventilation has been provided for interior rooms where required.

The building is of two stories, with a one-story wing at the rear containing the boiler-room, a general storage room and colored men and women's toilets. The first floor contains an entrance lobby with an information window; a clinic room seating 50 people with space for additional seating and the various examination rooms, consultation offices and the clerk's office opening off same. Drug closets are also provided in this section. Office quarters are provided on this floor for the Health Officer, Secretary and vital statistics. A dark room is provided for fluoroscopic work with men and women's dressing rooms adjoining. Also, a treatment room is provided for special work with a separate adjoining waiting room for this service. A prescription room and white men and white women's toilets completes the first floor. The second floor contains spacious quarters for the sanitarians and nurses with private offices for the

Chief Sanitarian and Superintendent of Nurses. A large laboratory is provided on this floor, an office for the County Physician and waiting room adjoining, a Dental Room and X-ray space with adjoining developing room is also provided. Men and women's toilets for the office help are provided on this floor and ample storage and utility closets provided.

The building is completely equipped with wood furniture in keeping with the building. The laboratory, examination and treatment rooms are supplied with fine new equipment necessary for the various operations, including a precision incubator, drying oven, autoclave, scales, microscope, colony counter, dressing tables and other necessities. A light weight mobile shockproof X-ray unit has been included, complete with all accessories.

The general layout of the building as a whole was planned for flexibility and easy circulation among the various facilities and it is felt that the building is extremely satisfactory and is already proving of the greatest benefit to the intricate and diversified activities of the entire Health Organization.

The health department conducts five free Venereal Disease Clinics weekly for the diagnosis and treatment of all venereal diseases. The clinic space is utilized once each month for a district Orthopedic Clinic. This clinic for cripples serves Cumberland and five surrounding counties as follows: Hoke, Sampson, Harnett, Bladen, and Moore counties. The clinic room is frequently used for mid-wife classes, and for other gatherings, such as. Women's Committee for Defense, staff conferences, and similar activities.

Tuberculosis clinics are conducted regularly on Wednesday, Thursday, and Saturday of each week for the examination of cases, contacts, food-handlers, or any other person who would like to have their lungs examined at regular intervals, as a part of our life extension program. Tuberculosis examination consists of case history, fluoroscopic examination, and X-ray is made if indicated. Treatment room on first floor is used for various purposes, such as obtaining blood specimens and smears for laboratory examination, im-

munization, dressings, physical examinations and the like.

All birth and death certificates for the county are handled by the health department. The health officer being registrar for the entire county makes it necessary that an office and clerk be devoted to this purpose. The office of the health officer is used for conferences of various kinds with the staff, as well as the general public.

The second floor of the building is used primarily for housing the staff, each worker being provided with individual desks and suitable equipment to carry on the various activities conducted by health department personnel. No patient activities are carried out on this floor. A large space on second floor is used for laboratory. The laboratory does all examinations that are required by a health department; such as, Kline tests, examination for intestinal parasites, cultures, smears, malaria slides, sputum examinations, urinalysis, blood counts, etc. This laboratory also serves practicing physicians in the county.

Several Maternity & Infancy, Contraceptive, and Prenatal clinics for white and colored, due to the shortage of space in our former location, are being held at various stations throughout the county and city, however, it is contemplated several of these clinics will be moved into the health center as soon as it is practical to do so.

BULLETINS — HOW TO MAKE THEM MORE EFFECTIVE, Catherine Emig. Social Work Publicity Council, 130 East 22nd St., New York, N. Y. 24 pages. 50c.

PHOTOGRAPHS—HOW TO USE THEM, Social Work Publicity Council, 130 East 22nd St., New York, N. Y. \$1.00.

GUARDING YOUR FAMILY'S HEALTH, Wilson G. Smillie, M. D. Life Conservation Service, John Hancock Life Insurance Co., Boston, Mass. Free.

Christmas Seals have helped to reduce tuberculosis from the first cause of death in 1912 to the seventh.

The Maladjusted What Can We Do About It?

By CARL V. REYNOLDS, M. D.
Secretary and State Health Officer
Raleigh, North Carolina

THE BRAIN is a mass of nervous material within the cranium which we know little about.

PSYCHOLOGY means (mind discourse) or that branch of science which treats of the mind and mental operations in behavior.

PSYCHOSIS (soul) any disease or disorder of the mind characterized by mental aberration.

Naturally then, it is with a great deal of timidity that I approach the subject to be discussed that has been propounded by specialists in the field of psychiatry when I can hardly pronounce the words!

As a leader of the discussion, necessarily then, I will have to approach the subject from a non-scientific viewpoint.

Is it not a stimulating challenge to use the knowledge we have to lessen the incidence of mental illness? Psychiatry has advanced to the extent that detecting early manifestations that lead to permanent mental disturbance could be prevented or cured if discovered in its incipiency. We have devoted, and are devoting, our efforts to the custodial care of the permanently disabled with an ever-increasing incidence, with little or no effort being made to explore the field of causes and to establish ways and means of reaching our objective through preventive measures, early pre-hospital diagnosis, for it is here we have the greatest chance for arrestment or cure.

Our immediate approach should be to attack the problem by attacking those diseases without psychosis; namely, mental deficiency, alcoholism, drug addiction, personality disorders, psychopathic personalities; and those with psychosis, general peresis, alcoholic, and drug addiction, etc.

What is the problem? Of the 179 state hospitals, 2 federal, 80 county-city, 26 veterans

and 187 private hospitals, there were 532,999 on the books of mental hospitals for mental diseases, and 88.8 percent of these were in the hospitals.

In the hospitals' first admissions there were 105,989 in 1940 and this group increasing each year.

There were, first admissions, without psychosis, in 1940, 7,142 alcoholics; 842 drug addictions; 8,431 peresis; and in North Carolina's prison population there is an annual turn-over of 20,000.

In this psychopathic group are heterogeneous, social and maladjusted persons who lack a sense of security, who are unstable, not dependable, insubordinate, and as I am informed, easily influenced, take to drink, cheating, gambling, and other vices.

In the last war, there were 72,000 neuropsychiatric cases returned to civilian life from our forces up until May 1, 1919—9 percent were classed as psychopathics. (William H. Dunn)

Did this experience mean anything to us in the way of correction through prevention, or an effort for an early diagnosis? Not much, if anything. Why does it take a catastrophe to awaken us?

Psychosis, in its broad interpretation, is a serious menace to our economic and social order.

Science has advanced far beyond the public's willingness to accept and apply its advantages.

The basic element of any successful endeavor is a sound organization carrying forward intelligently and conscientiously the issue presented.

The approach to our psychosis problem should be through a community survey of the prevalence rate of psychotics. All hospital

case records should be studied for information to start our research work in the communities selected for the survey.

Early diagnosis is the key note to success. Then, it is a logical conclusion to assume that in the patient's environment is the rational place to start correctional measures.

There is a real need for community psychiatric services and it is imperative that mental hygiene clinics be established throughout the country if we hope to cope with one of our greatest obstacles to progress. Our present outmoded approach should be replaced by a more scientific approach. It is more economical, and certainly more humane.

By so doing, we will begin to empty our institutions of the mentally sick and our penal institutions of its inmates, so many of whom are there on account of moral, mental and physical deficiencies, from psychotic causes, and by making these corrections we will exchange sorrow, sickness and crime for happiness, health and morality.

I desire to introduce further that it should be our determination to DO, not just discuss, something about the restoration of these forgotten men, the psychotic, with and without psychosis, emphasis being placed on the without psychosis group. Next, I would maintain that there are many phases where overlapping occurs in the fields of mental, physical and social agencies, workers grounded in medicine should be the directing agency supported by physical and social agencies. It may be idealistic to say that every child born should be born with a sound mind and a sound body in order that he or she may compete for his place in this world, and that the sound mind and body should be maintained through the preservation of health and the prevention of disease. It is through the lack or break-down of environment, social and disease prevention programs that activates moral, physical and mental decadence. Raymond S. Crispell has this to say: "Factors in mental, nervous and emotional disorders are not only mixed by being partly physical and partly mental, but are also apt to be multiple, complex and variable. Each patient has to be individual-

ized." I make the point that we should attack the problem in mass through a better distribution of environmental, social and medical care and give individual attention to the psychotic that fail to make the grade.

Just here is where we have fallen down. Our institutions are furnishing custodial care with an ever-increasing demand for more space for the increased demand to house the mentally sick, the insane, the mentally deficient, the blind, the prodigal son and daughter, and the criminal, whereas we should devote our greatest effort to the etiology and its prevention rather than the cure and custodial care. Our approach in emptying rather than expanding our physical equipment for institutional care should be to secure a sound cell for the seed of life as we do sound seed for our soil. How? That mating shall take place only among the mental and physically sound. We can approach this goal through maternal and infant care clinics, treatment of the syphilitics, alcoholics, nutritional disturbances, etc., leading to the mental and nervous diseases.

The application of the principal of eugenics is too long delayed and an effective program for planned parenthood for the healthy, and the sterilization of the degenerates should be forthcoming.

Peresis is one, if not the greatest problem we have confronting us and by the proper approach we could eliminate 9.5 of the patients admitted to be in our State hospitals due to this cause.

Neuropsychiatric conditions have been responsible for about 7 percent of all Selective Service rejections—63,000 men up to May first of this year.

This is a challenge to our ingenuity. We must do something about it.

The tuberculosis death rate among unskilled workers is seven times higher than that among professional workers.

The number of active cases of tuberculosis in the United States is estimated to be about 500,000.

Gonorrhea-A Dangerous Disease

By MARGERY LORD, M. D.

City Health Officer

Asheville, North Carolina

So much emphasis and publicity has been given to syphilis that many people think of venereal disease in terms of syphilis only. They do not know that gonorrhea is also one of our five venereal diseases. They do not realize that it is next to the common cold and measles, our most common communicable disease. Even the Medical Profession has been lax in accepting its responsibility toward the diagnosis and treatment of this disease.

In the fall of 1940 I attended the four month's short course for Health Officers at the School of Public Health in Chapel Hill. We received excellent help as to the diagnosis, treatment and control of syphilis but only one lecture on gonorrhea. In July, 1942 I attended an Institute in Venereal Disease Control at Chapel Hill, at which as much thorough information was given us concerning the recognition and control of gonorrhea as syphilis.

False information concerning gonorrhea has made many infected with this disease kid themselves into believing it is no more serious than the common cold and pursuing the same trend of thought, they seek no treatment for it or else go to the nearest drug store—engage in a whispered conversation with the clerk and come out quite satisfied with a cure all. Little do they realize how they have been gyped. First, no diagnosis has been made. They do not know if they have the disease for which they are swallowing pills or using other local treatment. Second, they do not realize that correct dosage is necessary in order to get results, even tho' the same drug is used. Third, how will they know when they have been cured? Fourth, each individual living in society has a certain obligation to the "other fellow." If any person has any communicable (catching) disease,

he knows, if he stops to think, that he caught that disease from some one else and that he may have given it to one or more other people. So our drug store patron has not been playing fair with himself or with others.

Let me illustrate with a case of smallpox. That too, is a communicable disease and we who direct your health departments try to protect you from all catching diseases. We do not censor anyone for the manner in which a disease is caught. To us it means, from whom did it come and to whom has it spread, be it smallpox or gonorrhea. Gonorrhea is not a stage of syphilis. Just as smallpox is recognized as a separate disease with a definite cause so is gonorrhea a specific disease caused by one thing—the gonococcus.

An individual, at large with smallpox undiagnosed and drug store treated, is not as dangerous to the public health of a properly vaccinated community as one having gonorrhea handled in this manner. There is no protection against gonorrhea through vaccination. Please read carefully my next statement. The spread of gonorrhea is practically always thru intimate contact and by that I mean sex contact, so a food handler or domestic will seldom spread this disease in carrying on the duties of their occupation. Smallpox is very catching through only casual contact so if it were not for vaccination we would continue to have epidemics of this dreaded disease. If any of you have seen individuals who have survived smallpox you have noticed the numerous scars on their faces and bodies. Gonorrhea doesn't harm the surface of our body but it leaves permanent scars, particularly in women. It is the most common reason why women cannot have children. Before drops were put in the eyes of our new born babies, many of them went blind, due to a

gonorrhreal infection which came from their mother. Even now it is a too common cause of blindness in young children.

I am still comparing smallpox and gonorrhea because I would like to make everyone feel it is but another communicable disease that should be dealt with as such. If one recovers from smallpox he may be assured that is one disease he will never contract again. This is not so with gonorrhea. We have certain medicines now which cure this disease so we offer hope to anyone having it that they may be cured, but there is no evidence that they may not get this disease again if they are intimately re-exposed to the gonococcus. So this is a point to remember—re-infection with the same disease may occur—there is no immunity to gonorrhea.

The diagnosis and treatment of gonorrhea in men and women is so different that we have recently established a separate weekly clinic for each in our Asheville-Buncombe County Venereal Disease Clinic. In our Women's clinic we have examined 214 patients during the last six months. 138 of these had gonorrhea. Just as all who are held in our jail are given a blood test to see if they have syphilis so are all the women in jail given a thorough examination to see if they have any evidence of the five venereal diseases. This includes smears and cultures for the laboratory diagnosis of gonorrhea. A case of venereal disease in a communicable stage found in a prisoner is treated until it is non-infectious before the prisoner is released. By

interviewing these women and finding out from them the probable source of their infection we get men under treatment. In this way we are trying to control another venereal disease.

To summarize: Gonorrhea is a dangerous, very communicable disease, caused by its own specific organism, the biscuit shaped gonococcus. In the United States there are three times as many people who have gonorrhea as syphilis.

In order to diagnose this disease, a physician makes certain examinations which include laboratory work. Both examinations and laboratory work are different from that done for syphilis just as is the treatment of gonorrhea very different from syphilis.

The spread of gonorrhea is through intimate or sex contact, not thru sitting on toilet seats or eating food served by a waiter or waitress having this disease.

A person with a communicable disease has a double responsibility; proper treatment to insure cure for the sake of the individual and also to prevent spread to others.

The purpose of this article is to try to correct an erroneous impression many have as to the insignificance of gonorrhea and to emphasize the fact that gonorrhea is a separate disease which is dangerous to the health of the individual having it. The reading public should be acquainted with any disease which is the main cause of sterility in women and a common cause of blindness in young children.

Tuberculosis In Wartime*

By ROBERT E. PLUNKETT, M. D.
State Department of Health
Albany, N. Y.

THE quota of victims of tuberculosis rises or falls as general social and economic conditions are unfavorable or the reverse. War, more than any other circumstance, breeds the adverse environment which is conducive to

an increase in the prevalence of this disease. While it is highly improbable that our war problems may create the same degree of environmental change now prevailing in some of the European countries, there are certain

indices in the literature which deserve serious consideration by health officials in anticipating the possible trend of tuberculosis in this country, particularly if the war continues.

According to an article in the May, 1942 issue of *TUBERCLE*,¹ the number of tuberculosis deaths in England and Wales increased 12 per cent between 1939 and 1941—a fact of special interest because the death rate from all causes had not advanced noticeably during the same period. Overcrowding, resulting in exposure of children to open cases of tuberculosis, insufficient rest and restricted diet unquestionably contributed to this rise. While the number of deaths from pulmonary tuberculosis increased only 10 per cent during this period, fatalities from tuberculosis meningitis increased 40 per cent. Moreover, the number of deaths from tuberculosis (all forms) among children under ten years of age was 45 per cent higher in 1941 than in 1939.

These increases in tuberculosis prevalence among the civilian population may be traced, in part, to the subsequently reversed policy of closing tuberculosis hospitals during the early days of the war and to sending infectious patients home. Under these less favorable conditions many of those patients already ill died earlier than they might have otherwise and in addition spread the infection among their families.

Between the years 1938 and 1940, there was a 50 per cent increase in tuberculosis deaths among mental patients in England and Wales. The rise in this group is of interest because of the fact that these patients, although not subjected to long working hours and the strain of industrial fatigue, did experience overcrowding because some of the facilities in mental hospitals were taken over for war services.

Scotland experienced an even greater proportionate increase in tuberculosis deaths than England and Wales. In this country, the total rise from 1939 to 1941 was 18 per cent while the rise from tuberculosis meningitis during the same period was 50 per cent.

In an article in the Milbank Memorial

Fund QUARTERLY,² Dr. Ramon F. Minoli states that tuberculosis deaths in Paris during the first six months of 1941 increased 10 per cent over the number during the first half of 1939. Among children from one to nine years of age, this rise was 28 per cent. Doctor Minoli gives further evidence of the upward trend of tuberculosis: the number of requests for sputum examinations in Paris laboratories not only increased but the proportion of positive results showed a pronounced change. The figures for five laboratories follow:

1938—54.3 positive results per 1000 sputum examinations

1939—59.1 positive results per 1000 sputum examinations

1940—72.2 positive results per 1000 sputum examinations

1941—211.0 positive results per 1000 sputum examinations

Doctor Minoli also reported a survey made in the early summer of 1941 of the total food consumption of sixty-five Parisian families whose homes were visited by specially trained nurses each day for a week. The diets of this group showed a total caloric insufficiency of about a thousand calories daily; a calcium deficiency and a calcium-phosphorus imbalance; and an insufficient amount of vitamin A. Doctor Minoli concludes: "If the present dietary regime continues and the consequences increase, the problem of tuberculosis in France will be exceedingly grave."

The significance of nutrition in relation to tuberculosis is pointed out in a reference by Edgar L. Collis³ to work done by Hart and Wright who compared the course of tuberculosis mortality in certain age periods with the index of real wages, representing the value of wages in pounds sterling after allowances had been made for variations in purchasing

¹ A Further Review of Tuberculosis in Wartime, by Frederick Heaf and Lloyd Rusby, *TUBERCLE*, May 1942, p. 107.

² Food Rationing and Mortality in Paris, 1940-41 by Ramon F. Minoli, M.D., The Milbank Memorial Fund QUARTERLY, July 1942, p. 213.

³ Tuberculosis and Influenza in Relation to the World War, 1914-18, by Edgar L. Collis, C.B.E., D.M., M.R.C.P., Supplement to *TUBERCLE*, Aug.-Sept. 1940, p. 13.

power of money. In England, from 1851 to 1900, there was a constant increase in the purchasing power of wages from an index of approximately 95 to 180. During this period, there was a continuous decline in the pulmonary tuberculosis death rate from 390 per 100,000 population among women in the age group 15-24 to 110 per 100,000. In the age group 45-54 the death rate dropped from 310 per 100,000 to 150. During the three decades following 1900, there were several periods when a lowering of purchasing power was experienced and in each instance there was a rise in the tuberculosis death rate. The close accord between the changes in real wages and tuberculosis mortality was conspicuous in the 15-24 year age group and less marked in the older age group.

Further reference to the effects of war on the tuberculosis death rate is made by Collis as follows:

"This war period (1914-1918) may be regarded as a definite experiment carried out on an extensive scale. Food shortage became more and more pronounced as the years passed. Simultaneously, the mortality from phthisis in youth and early adult life rose; although after 35 little effect can be traced. The rise can only be attributed to deficiency in food supply. Greenwood showed that the rise among the females occurred in direct proportion to the extent that they were engaged upon producing munitions of war; it did not occur in districts where no such activities were in progress. The phrase 'a deficiency of food' must then be interpreted to mean a

food supply which is deficient having regard to energy output rather than a supply deficient for merely maintaining life. When the war years passed, food became available again, and, owing to a temporary boom in trade, there was money for its purchase. A fall in the phthisis mortality took place at all ages, and especially at those ages where the wartime rise had been most pronounced."

In this country, migrations of large numbers of people, overcrowding, the introduction of women into industry, long hours of labor, modified diets, and greater expenditure of human energy in diversion form a mosaic of environmental factors which may influence the trend of tuberculosis. In varying degrees and circumstances we are now experiencing these social mal-adjustments; we can not close our eyes to the possible consequences. The X-ray is necessary to discover newly developed cases. When the disease is discovered in the early stages, the opportunity for the spread of the disease, both in the individual and to others, is materially reduced. While tuberculosis in any of its stages may, for practical purposes, be cured or at least made non-infectious, it is the early case which holds the greatest promise of complete recovery in the shortest possible time.

Anticipating possible serious consequences to health from complacency or neglect, provision should be made now to extend tuberculosis case finding by X-raying industrial workers and other groups of the population in which a high yield of new cases may reasonably be expected.

Life and Death in North Carolina in 1942

By WILLIAM H. RICHARDSON
North Carolina State Board of Health
Raleigh, North Carolina

BABIES and young children have gotten a pretty good break in North Carolina since America's entrance into the war, in spite of

the distressing circumstances that have already come as a result of this country's participation in the global conflict now in progress.

There has been an appreciable decline in infant mortality in this State since the beginning of 1942. From January 1 to October 1 there were 3,232 deaths reported among babies under a year old. While this number is too high, by far, yet during the first nine months of the preceding year the total was 3,893, which reflects a decline of 661 during the current year, in spite of handicaps which are obvious. The all-important question now is: Can this gain be held? It represents simply a trend, of course, and one that may be reversed at any moment. However, a trend is a very important thing and must be considered seriously.

There has also been a marked decline in the number of deaths from diarrhea and enteritis among children under two years of age. These infantile summer ailments took a toll of only 295 from May through September, this year, as compared with 458 during the warm months of 1941, a decline of 163.

Deaths from what are termed preventable accidents and from preventable and controllable disease through September this year numbered 3,613. Preventable diseases are those which can be warded off by means of immunization, while controllable diseases include those which may be rendered non-fatal if diagnosed in time.

As to preventable accidents, these have shown a sharp decline this year, due, undoubtedly, to stricter regulations governing traffic and the rationing of gasoline, which has had a tendency to minimize wild, foolish and useless driving. While there still may be those who use the gasoline available to them for joy-riding purposes, yet the restrictions, on the whole, have had a very telling effect in the saving of human life.

Deaths from all preventable accidents in North Carolina, through September, this year, totaled 1,152, as compared with 1,306 during the corresponding period of 1941, a decline of 254.

So far reported this year there have been 64,890 babies born in North Carolina, as compared with 64,101 through September last year, an increase of 789. What the total for

the entire year will be cannot, of course, be forecast—but there seems little likelihood of any decline during the remaining months of 1942.

There has been a very gratifying decrease in the number of deaths from all causes so far reported for 1942. The total through September was only 22,003, as compared with 24,404 for the corresponding period of 1941, a decline of more than 2,400. Of this decrease, it is heartening to note the 661 reduction in deaths among babies during their first year. There have been 25 deaths resulting from diphtheria, a purely preventable disease, mostly confined to children of tender years—children whose parents or guardians could have saved them by having them immunized. However, there were 37 diphtheria deaths during the corresponding period of 1941, indicating that some progress has been made, but not enough. A strict enforcement of the 1939 law requiring the immunization of all children during their first year of life might well have eradicated diphtheria in North Carolina by this time.

One of the greatest services parents and guardians could perform would be to see that the children in their care were all immunized not only against diphtheria but against every disease for which there is a preventive. Regardless of the length of the war, such precautionary measures would constitute a permanent contribution to the cause of public health, which, after all is personal, or individual, health.

If those diseases which, undoubtedly, can be eliminated could be wiped out, human expectation would be increased to an appreciable degree. In spite of the indifference of many, the fact that the span of life has been increased from 40 years the middle of the past century to about 64 years at the present time is due more largely to preventive medicine than to any other cause. Elimination and control of many of the diseases of childhood have, beyond question, been largely responsible for increased longevity. There has not been as much success in the control of degenerative diseases, although many causes of such ail-

ments have been isolated and, in many instances, brought within the realm of prevention.

One of the most remarkable achievements of science during recent years has been the successful fight against pneumonia, the death rate from which is constantly being whittled down. For example, the pneumonia death rate in North Carolina in 1917 was 107.3 per 100,000 inhabitants. As late as 1936, it was 93.7; by 1938 it had dropped to 76.8, and last year—that is, in 1941—it had fallen to 56.8. If the present trend continues, it will be even lower this year. Through September, 1942, there had been only 1,286 pneumonia deaths reported in this State, as compared with 1,600 for the corresponding months of 1941, a decrease of 314 during the first nine months of the current year.

Pneumonia is being brought under control through the use of certain specifics which recently have been developed and which successfully are being used to combat this and other infections which formerly yielded slowly, when at all, to treatments then in use. There is hardly a family in North Carolina some member of which has not been a victim of pneumonia.

In considering vital statistics trends for the current year, it might be interesting to note that, through September, there were a dozen deaths throughout North Carolina resulting from tetanus, commonly known as lockjaw. Last year, during the corresponding period, there were fourteen such deaths, with two more added during the last three months of 1941.

Tetanus is preventable, through the use of anti-toxin prepared in the State Laboratory of Hygiene and made available to doctors for proper administration. It must be taken as an early precaution. Anyone wounded by a nail—especially a rusty nail—a pitchfork, or any sharp instrument after the extraction of which the wound closes up, should consult his or her physician at once, lay the facts before him and take his advice without question. The physician is in a position to know whether the administration of tetanus anti-toxin is necessary—and it is available to him.

Typhoid deaths in North Carolina through September numbered only 14, as compared with 26 during the corresponding period last year. Time was when this disease carried thousands to their graves each year. Science has made it preventable, and those who become victims to it, do so because of their own negligence. Malaria also is being brought under control.

There has been a decline in homicides during the current year, the number reported through September having been 241, as compared with 251 the first nine months of 1941.

While civilized humanity is fighting its battles against the Axis barbarians, science continues its fight against disease, with telling results; but those who would be the beneficiaries of scientific discoveries designed to save life and prevent suffering must cooperate by taking advantage of that which is made available to them.

And now until next Thursday at this same hour, your State Board of Health bids you good afternoon and wishes you the best of health.

Help The Child To Hear*

NOT only during National Hearing Week but always attention should be directed to the prevention of deafness as well as to helping those who have lost their hearing.

The causes of deafness are varied, but there is a large proportion of cases in which deafness can be prevented. Prevention is most

effective when begun in early infancy. It is in early infancy that influenza, scarlet fever and frequent colds often initiate the infection of the middle ear which later results in loss

*Connecticut State Department of Health
Weekly Health Bulletin
Volume 24, No. 44 October 26, 1942

of hearing. Prevention of such diseases, therefore, is a means of preventing some of the deafness of later life. Keep the infant and young child away from other children or adults who have sore throats or head colds. If the baby must be kissed, see that it is at the back of the neck and not on the mouth.

The middle ear contains the tiny bones and nerves concerned in hearing. Infection may reach this part of the ear through the narrow tube which connects it with the throat. Blowing the nose violently may force drainage from the throat to the middle ear with resulting infection. This is often the cause of the ear trouble experienced by swimmers. Children and adults should be taught to wipe rather than blow the nose. If the nose is blown at all, it should be done gently, closing one side at a time.

Another source of trouble may be the mother's yearning for clean looking ears. Wax is a natural secretion which, if left alone, will usually work its way out of the ear with no trouble. In her effort to remove wax, a mother sometimes uses cotton sticks. This results in a clean outer ear, but at the same time often pushes wax further into the canal and may even pack it hard against the drum. Quite recently a child's ear showed a raw spot in the canal. The mother had been very gentle, but the lining of the canal is easily damaged.

Beans and other foreign bodies placed in the nose or ear may lead to infection of the ear. It has been well said that nothing smaller than the elbow should be put into the ear! If a child does put a foreign body in the ear or nose, he should be taken to a physician as soon as possible. Special instruments are needed to remove such a foreign body safely. Attempts made at home are likely to result in pushing the object further into the nose or ear, not only making it more difficult to remove, but in the case of the ear, endangering the ear drum. Prompt medical attention here may prove a saving of much misery.

Medical attention early in an illness is a safeguard against chronic conditions which may lead to loss of hearing. Children who

are taken to the family doctor regularly for physical examination and advice are protected from the effects of unsuspected conditions such as diseased tonsils, enlarged adenoids and other nasal growths. If the doctor finds that there is middle ear infection, he may incise the ear drum. This heals much more quickly and completely than if the pus in the middle ear forces its way through the drum. Incising the drum relieves the pressure and guards against a mastoid infection.

Reliable hearing tests should be made on the preschool child. If hearing defects are found, an ear specialist should be consulted. He may recommend the removal of tonsils and adenoids; an ear operation; or perhaps only the removal of wax. The child's hearing depends upon the care he has had in regard to general bodily health; the prevention and prompt treatment of head colds, influenza, measles, scarlet fever; routine health supervision; and proper teaching in regard to blowing the nose. The hearing of the adult can be protected by protecting the hearing of the child.

Notes and Comment

(Continued from page 4)

1. In a hospital which has a school of nursing as
 - a. Administrator in a key position
 - b. Instructor
 - c. Supervisor
 - d. Head nurse, in position related to teaching or supervision
2. In a hospital without a school of nursing, as
 - a. Administrator
 - b. Supervisor
3. In a public health agency, as
 - a. Administrator
 - b. Teacher and supervisor
 - c. Staff nurse essential for maintaining minimum civilian health services in any given community
 - d. Industrial nurse

Nurses who are eligible and wish to enter
(Continued on page 16)

Help Your Doctor

THE War Participation Committee of the American Medical Association makes the following suggestions.

"1. Call the doctor to your home only when necessary. Go to his office when you can.

"2. Help the doctor to plan proper use of his time by calling him before nine o'clock in the morning whenever possible.

"3. Have an examination at the first sign of sickness. This helps prevent long and serious illnesses.

"4. Some conditions are best treated in the hospital. Cooperate by providing in advance against the cost of hospitalization. Go to the hospital when the doctor recommends it.

"5. Have yourself immunized against smallpox and lockjaw.

"6. Avoid overeating, overdrinking, overworking and overexercising. Get a good diet. Follow the rules of personal hygiene.

"7. Women should take first aid courses and nurse's aid training of the Red Cross. This will help to relieve the burden on the physician and nurses in the hospital and in the home.

"8. Every doctor not already in the armed forces is probably doing extra work in industry, public health and in his private practice. Help him to conserve his health by avoiding any unnecessary responsibilities for him."

Notes and Comment

(Continued from page 15)

military service should enroll in the First Reserve of the American Red Cross Nursing Service for assignment to the Army Nurse Corps or the Navy Nurse Corps.

Each nurse, and agency employing nurses, is urged to get in touch with:

The Local Nursing Council for War serv-

ice—for guidance as to the needs and distribution of nursing service.

The secretary or chairman of the Local Committee on Red Cross Nursing Service, or the local American Red Cross Chapter—for information about enrollment in the First Reserve of the Red Cross Nursing Service for service with the Army or Navy Nurse Corps.

Continued and careful study, on the part of both agency and community, will be necessary to an equitable distribution of service. Geographical barriers must be set aside to meet the greatest need wherever it exists.

HAPPY

Happy? Of course!

Why shouldn't I be?

Ill? To be sure.

But it's only tb.

Yes, I'm a "lunger"

But why condole?

It's just in my lungs

All's well with my soul.

—From The Cheer-U-Upper.



Rita Jean Elliott, 11 months old, weight 30 pounds, daughter of Mr. and Mrs. Fred Elliott, Route 3, Rutherfordton, N. C.

The Health Bulletin, Infant Care and Baby's Daily Time Cards were helpful.



